# Appendix A

Notice of Preparation and Comments

# NOTICE OF PREPARATION
# OF A DRAFT ENVIRONMENTAL IMPACT REPORT

**Date:** February 23, 2024

**To:** Agencies and Interested Parties

**From:** Bianca Dinkler, Project Planner, County of El Dorado

**Subject:** **Notice of Preparation of Draft Environmental Impact Report and Notice of Public Scoping Meeting for the Generations at Green Valley Project (General Plan Amendment GPA22-0001, Rezone Z22-0001, Tentative Subdivision Map TM22-0001, Development Agreement DA24-0001)**

**Review Period:** February 26, 2024 to March 26, 2024

The County of El Dorado (acting as the Lead Agency) is releasing this Notice of Preparation (NOP) on February 26, 2024, for the preparation of an Environmental Impact Report (EIR) for the proposed Generations at Green Valley Project (project) located in unincorporated El Dorado County (County). The NOP initiates the environmental scoping process in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21080.4) and CEQA Guidelines (14 California Code of Regulations (CCR) Section 15082). The purpose of an NOP is to provide sufficient information about the proposed project and its potential environmental effects to allow public agencies, organizations, tribes, and interested members of the public the opportunity to provide a meaningful response related to the scope and content of the EIR, including feasible mitigation measures and project alternatives that should be considered in the EIR (CEQA Guidelines, 14 CCR Section 15082(b)). The proposed project and location are briefly described below.

## PROVIDING COMMENTS

El Dorado County is soliciting written comments from public agencies, organizations, tribes, and individuals regarding the scope and content of the environmental document. Because of time limits mandated by State law, comments should be provided at the earliest possible date, but no later than 5:00 p.m. on March 26, 2024. Please send all comments to:

Bianca Dinkler, Senior Planner
County of El Dorado Planning Department
2850 Fairlane Court, Building C
Placerville, CA 95667
Email: generationsatgreenvalley@edcgov.us

Agencies that are responsible agencies or trustee agencies will need to use the EIR when considering permits or other approvals for the project. Such agencies should provide the name of a contact person, phone number, and email address in their comment. Comments provided by email should include "Generations at Green Valley Project NOP Comment" in the subject line, and the name and physical address of the commenter in the body of the email.

## PROJECT LOCATION

The project site is located in an unincorporated area of El Dorado County (Figure 1). Existing land uses in the project area consist of single-family residences and rural residential areas. The project site encompasses approximately 280 acres located on five current parcels, Assessor's Parcel Numbers (APN) 126-020-001, 126-020-002, 126-020-003, 126-020-004, and 126-150-023. The majority of the site is located south of Green Valley Road, with the exception of northern tip of the site that is north of Green Valley Road (portion of APN 126-150-023). This portion of the project is being removed as part of Boundary Line Adjustment that is being processed under a separate application to the County. The project also includes two proposed access roadway connections to Green Valley Road (C-Drive and A-Drive) that would use existing easements to access Green Valley Road.

## PROJECT DESCRIPTION

The El Dorado County General Plan land use designations for the site are Low Density Residential (LDR), with approximately 1.4 acres designated Open Space (OS) associated with an existing Sacramento Municipal Utility District (SMUD) utility easement. Zoning on the site consists primarily of Residential Estate, Ten-Acre (RE-10), with the SMUD easement zoned as Recreational Facilities, Low Intensity (RF-L). The proposed C-Drive extension area is zoned RE-5, while the proposed A-Drive extension area is zoned RE-10.

The Generations at Green Valley Project proposes to amend the General Plan land use designations to High Density Residential (HDR), Low Density Residential (LDR), and Public Facilities (PF). The project would also rezone the site to Residential, Single-unit (R1), Open Space (OS), Recreational Facilities, High Intensity (RF-H), and Residential Estate, Five-Acre (RE-5) (Figure 2). The proposed development area of the project would be within the General Plan designated El Dorado Hills Community Region boundary.

The project proposes a Tentative Subdivision Map that would subdivide the project site into 379 residential lots, clubhouse lot, park site lot, thirteen landscape lots, nine (9) open space lots, and three (3) lots for project roadways. Age restrictions would apply to 214 of the residential lots in the project. Proposed residential lot sizes would range from 6,000 square feet up to 5.7 acres. Roadway access to the project would be provided through two (2) main connections with Green Valley Road and three (3) emergency access roads connecting to existing roadways along the project's boundary. The project also anticipates constructing improvements and adding additional lanes to segments of Green Valley Road. The proposed park site would be 4.0 acres and would be proposed for dedication to the El Dorado Hills Community Services District (CSD). The design of the park site would be determined by the El Dorado Hills CSD, but may include a baseball diamond, tot lot, parking lot, and a restroom. The clubhouse site would be owned and maintained by the homeowners association (HOA) and may include community building, pool, barbeque facilities, bocci courts, and a pickle ball court. The open space would be owned and maintained by the HOA.

The project is proposing the following offsite transportation improvements as part of compliance with the El Dorado County Transportation and Circulation Element policies TC-Xd, TC-Xe, and TC-Xf:

- Optimize traffic signal coordination on El Dorado Hills Boulevard/Latrobe Road from White Rock Road to Saratoga Way (North).
- Modify traffic signal phasing and hardware for the Silva Valley Parkway and Harvard Way intersection to provide a southbound right-turn overlap.

In addition to these improvements, the project would construct improvements to Green Valley Road at the project proposed access points with C-Drive and A-Drive that would provide left- and right-turn pockets to promote safe traffic flow.

With the exception of proposed onsite wastewater systems for the RE-5 lots and park site, the project would obtain water and wastewater service from El Dorado Irrigation District (EID) and would involve the following offsite water and wastewater improvements that are shown in Figure 3:

Offsite Water Supply Improvements:

- Connection to an existing 8-inch water distribution pipeline within Lima Way on the project's western boundary.
- Construction of a new water distribution pipeline from the project's southern boundary to an existing 10-inch pipeline located in Greenview Drive.
- Construction of a new water distribution pipeline from the project's eastern boundary along Green Valley Road to an existing 12-inch pipeline west of Pleasant Grove Middle School.

Offsite Wastewater Conveyance Improvements:

- Connection to an existing 8-inch gravity wastewater conveyance pipeline within Lima Way on the project's western boundary.
- Upsizing of approximately 1,600 linear feet of existing gravity wastewater pipeline upstream of the Highland Hills Lift Station.
- Construction of approximately 8,500-linear foot force main from the Highland Hills Lift Station to an existing 15-inch gravity wastewater pipeline that flows to the St. Andrews Lift Station.

Other utility improvements for the project would include the following:

- Construction of eight (8) onsite detention/water quality basins,
- Improvement of existing electrical cable facilities and addition of new electrical cable along Sangiovese Drive, Appian Way (new trenching anticipated along Appian Way), and Lima Way; and
- Improvements to the existing electrical facilities along eastern portion of the project site.

In addition to the General Plan Amendment, Rezone, and Tentative Subdivision Map entitlement requests, the project is also requesting that the El Dorado Local Agency Formation Commission (LAFCO) approve the annexations of the site into the following districts:

- El Dorado Hills Fire Department (also known at the El Dorado Hills County Water District/Fire Protection District) for fire protection services,
- El Dorado Hills CSD for parks, recreation, and other community services, and

- EID for water and wastewater services.

## POTENTIAL ENVIRONMENTAL IMPACTS

Pursuant to the CEQA Guidelines, 14 CCR Section 15063(a), the County has determined that an EIR is clearly required for the project and has elected to not prepare an initial study. The County anticipates that the EIR will address the following topic areas:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Archaeological and Historic Resources
- Biological Resources
- Cultural Resources
- Energy
- Geology, Soils, and Mineral Resources
- Greenhouse Gas Emissions
- Hazards, and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services and Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

Full documentation of the factual basis for this determination will be provided in the EIR. Unless specific comments are received during the revised NOP public comment period that indicates a potential for the project to result in significant impacts, these topics will not be analyzed further in the EIR.

## ALTERNATIVES

Pursuant to CEQA and Section 15126.6 of the State CEQA Guidelines, the EIR will also analyze a reasonable range of alternatives that would reduce or avoid one or more significant environmental impacts identified in the EIR, and will include an analysis of the comparative environmental impacts of feasible alternatives to the proposed project. Alternatives would include a No Project Alternative, and one or more alternatives to address other significant effects of the proposed project that are identified in the EIR.

**FINDING**

The proposed project may have a significant effect on the environment; therefore, an EIR is required. The purpose of the EIR is to provide information about potentially significant physical environmental impacts of the proposed project, identify possible ways to minimize the potentially significant impacts, and describe and analyze possible alternatives to the project. Publication of a Notice of Preparation, Initial Study, or EIR does not indicate a decision by the County to approve or disapprove a proposed project. However, before making any such decision, the decision makers must review and consider the information contained in the EIR.

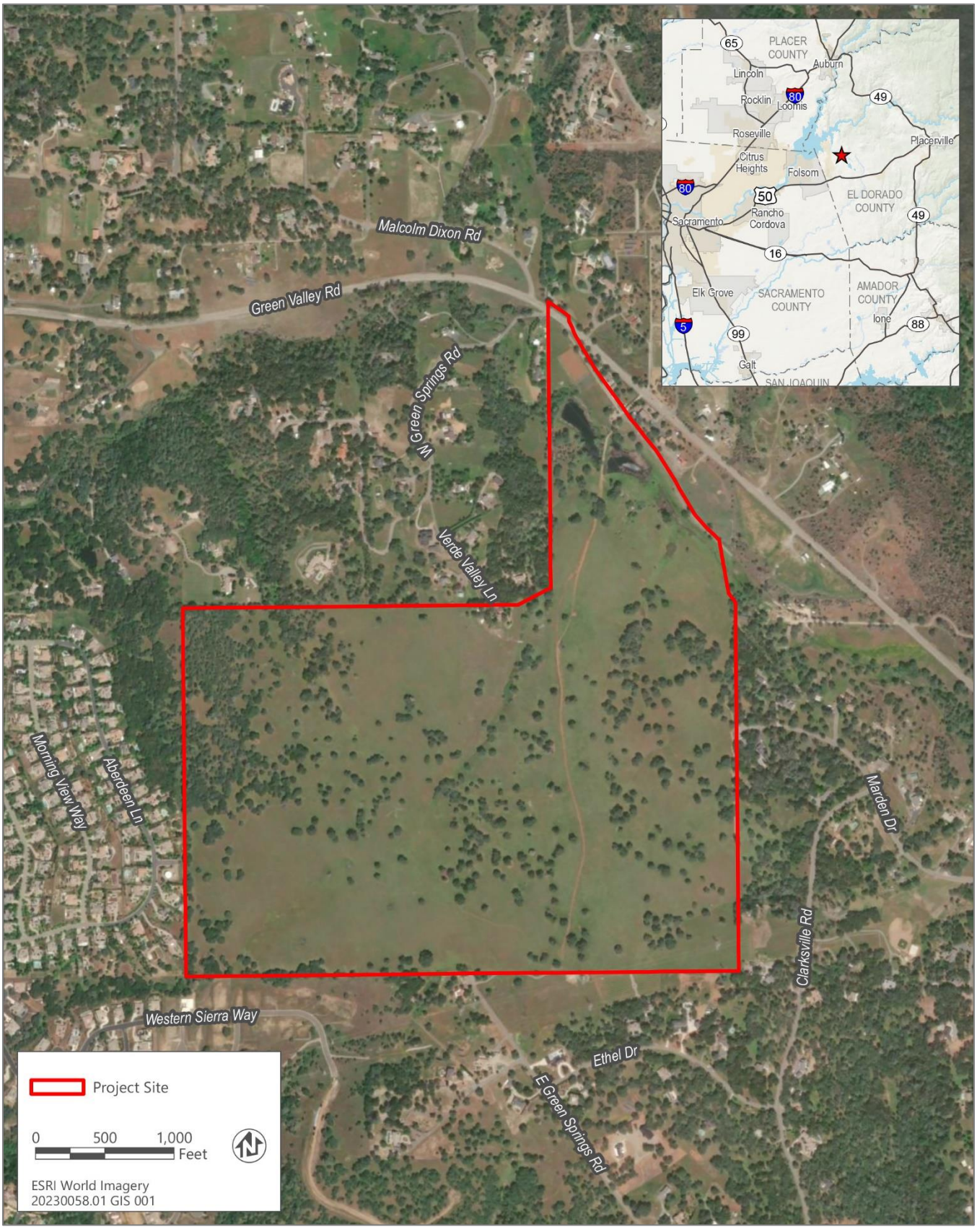
## SCOPING MEETING

El Dorado County will hold a public scoping meeting to receive verbal comments regarding the scope and content of the environmental document and answer general questions regarding the environmental process. The meeting will be held in-person with a remote option via Zoom on Tuesday, March 12, 2024 from 5:30 p.m. to 7:30 p.m. at the El Dorado Hills Fire Station, Station 85, located at 1050 Wilson Boulevard, El Dorado Hills, CA 95762. Here is the Zoom link: https://us06web.zoom.us/j/83062366195

Written comments regarding the scope and content of the environmental document may be submitted throughout the scoping period, which closes at 5:00 p.m. on March 26, 2024.

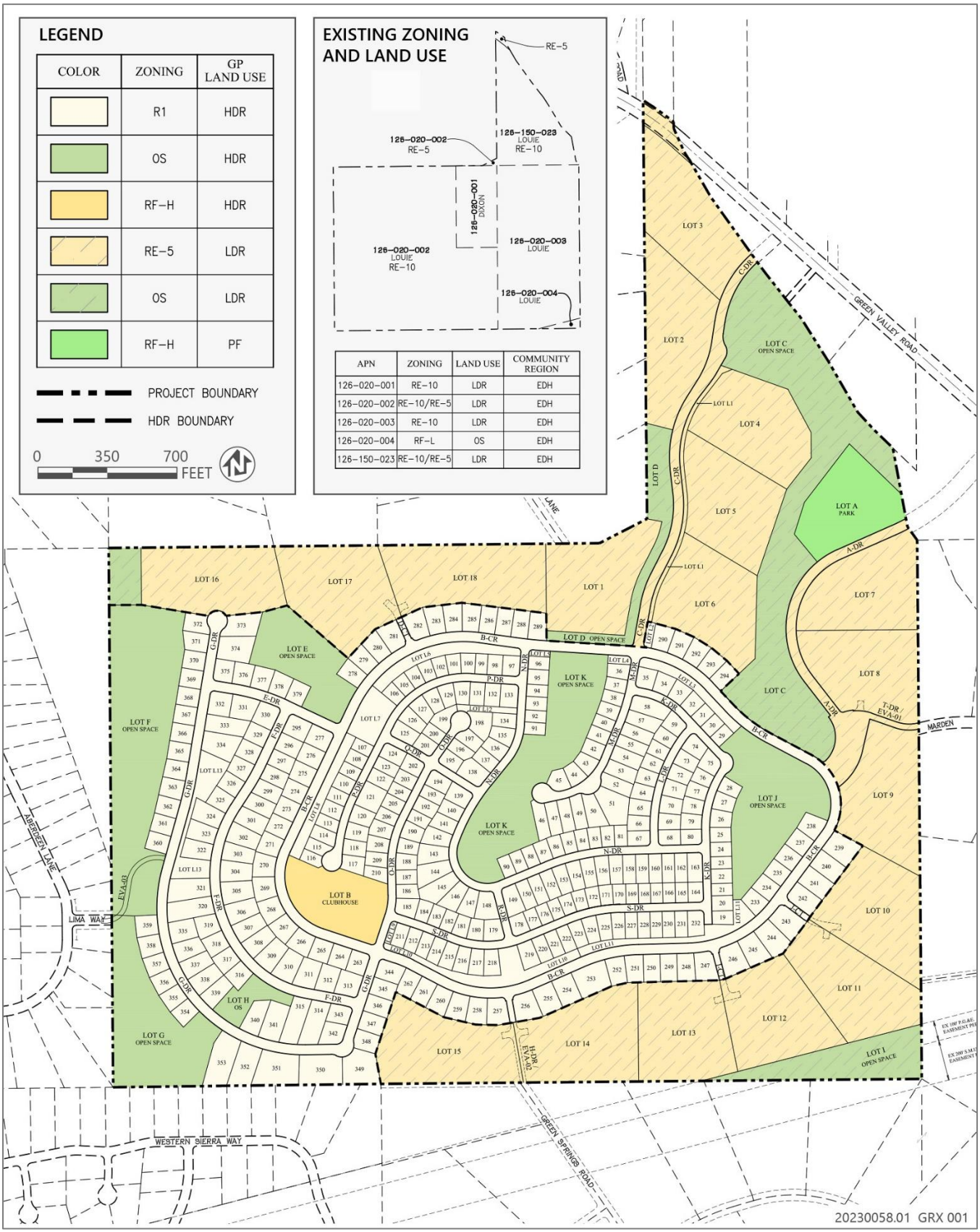
If you work for a responsible or trustee agency, we need to know your agency's views regarding the scope and content of the environmental information that is relevant to your agency's statutory responsibilities in connection with the proposed project; your agency may need to use the EIR when considering a permit or other approval for this project. We will also need the name of the contact person for your agency.

The County of El Dorado is committed to ensuring that persons with disabilities are provided the resources to participate in its public meetings. If you require accommodation, please contact Planning Services at 530-621-5355 or via e-mail, planning@edcgov.us.



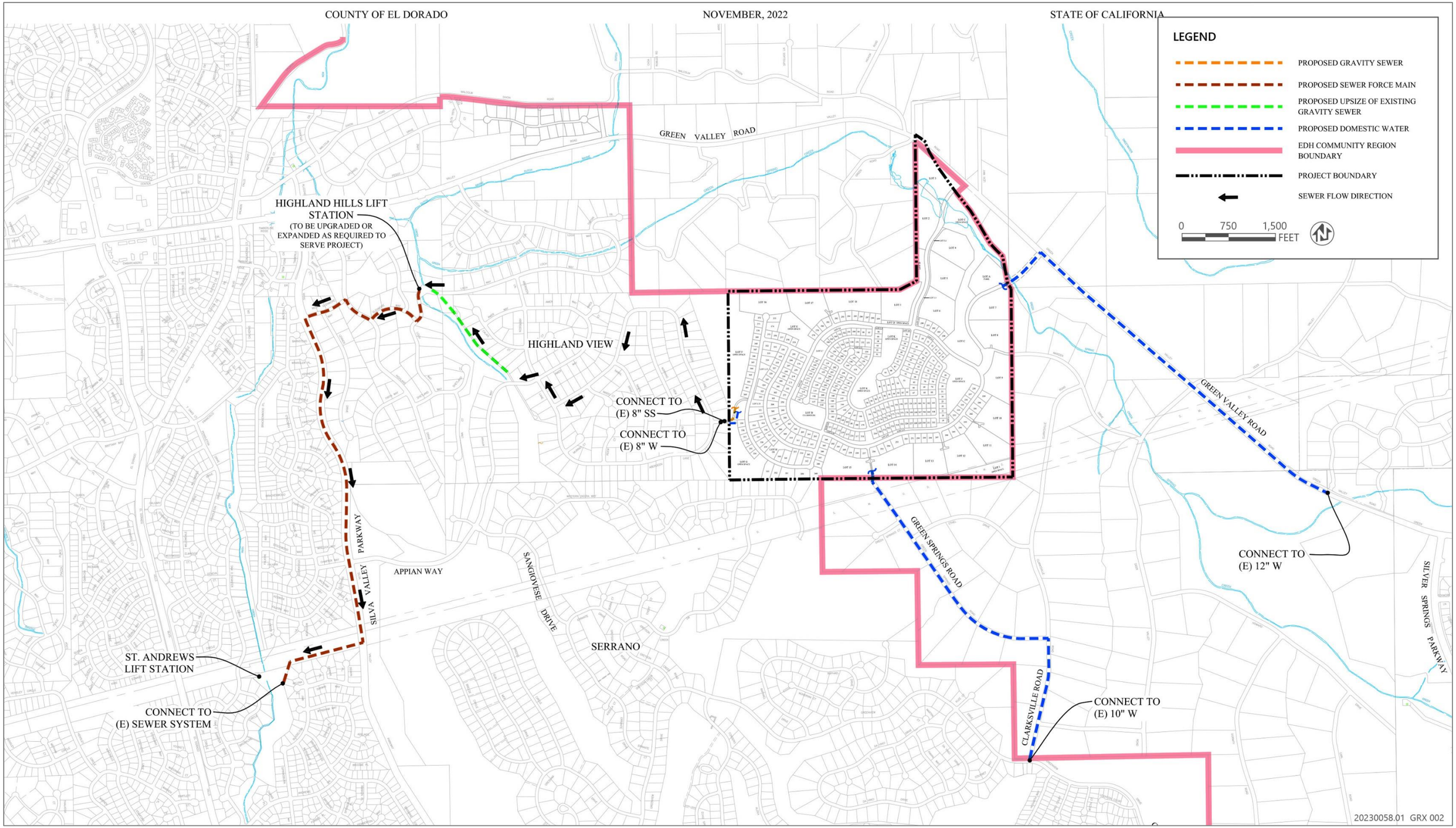

Source: adapted by Ascent in 2023

**Figure 1 Project Location**




Source: Image produced and provided by CTA Engineering and Surveying in 2022

**Figure 2 Proposed Site Plan**




Source: Image produced and provided by CTA Engineering and Surveying in 2022

**Figure 3 Proposed Offsite Water and Wastewater Improvements**

Table A NOP Comment Summary

| Comment/Date | Summary of Comments | Location of Where Environmental Issues Are Addressed in the EIR |
|---|---|---|
| Pacific Gas and Electric Company (PG&E)<br>February 23, 2024 | PG&E provides requirements for natural gas facilities and electric facilities for the project | Section 3.5, "Energy"<br>Section 3.15, "Utilities and Service Systems" |
| Pacific Gas and Electric Company (PG&E)<br>March 7, 2024 | PG&E states that the proposed improvements to not appear to directly interfere with existing PG&E facilities or impact its easements. | Section 3.15, "Utilities and Service Systems" |
| Lori Alireza<br>March 24, 2024 | The commenter requests that necessary studies be conducted to ensure the project would not negatively affect the neighborhood and points specifically to traffic, fire suppression, and utilities infrastructure | Section 3.14, "Transportation"<br>Section 3.17, "Wildfire and Evacuation"<br>Section 3.15, "Utilities and Service Systems" |
| Lori Alireza<br>February 26, 2024 | The commenter asks if the project plans to use Lima Way as an access road, as Lima Way is a fire access road and would be gated and locked | Section 3.17, "Wildfire and Evacuation" |
| Craig Campbell<br>March 24, 2024 | The commenter has the following concerns about the project:<br>▶ Emergency connection via Lima Way and Highland View<br>▶ Traffic circulation regarding Highland View and Lima Way<br>▶ Sewer line, trenching, and inadequate volume of the sewer line to accommodate the project<br>▶ Water, sewer, utilities demand added by new projects using the same utility systems as the commenter<br>▶ Full disclosure of the cost of the project<br>▶ The high density proposed and age restricted (55 and over) regarding life safety specific to traffic along Green Valley Rd<br>▶ Traffic circulation at Appian and Silva Valley Parkway<br>▶ Building housing south of 50 at Scott Road<br>▶ A full engineering study must be completed so as not to rely on assumptions<br>▶ Concrete and paving having a significant impact on stormwater runoff and water quality<br>▶ Density is too high regarding traffic, public safety, water, sewer, wildlife habitat and loss of mature oaks | Section 3.17, "Wildfire and Evacuation"<br>Section 3.14, "Transportation"<br>Section 3.9, "Hydrology and Water Quality"<br>Section 3.4, "Biological Resources"<br>Section 3.10, "Land Use, Planning, Agriculture, and Forestry"<br>Section 3.15, "Utilities and Service Systems" |
| Dave/Susan Comstock<br>March 14, 2024 | The commenters have the following concerns about the project:<br>▶ Pass through traffic using Lima Way as a fire access road<br>▶ Traffic safety risks associated with pass through traffic on Aberdeen Ln and Lima Way<br>▶ Public safety regarding lack of sidewalks and increased use of Aberdeen Ln<br>▶ Steep streets, no sidewalks, and possibility of increased traffic would pose an unacceptable risk to lives of residents | Section 3.14, "Transportation"<br>Section 3.13, "Public Services and Recreation"<br>Section 3.17, "Wildfire and Evacuation" |
| Dan Leeman<br>March 5, 2024 | The commenter asks a clarifying question regarding the traffic section and asks when Green Valley Rd will become four lanes and that the project will significantly impact traffic on Green Valley Rd | Section 3.14, "Transportation" |
| El Dorado Hills Aera Planning Advisory Committee EHD APAC) | The EDH APAC submits the following comments in response to the NOP | Pursuant to State CEQA Guidelines Section 15063(a), the County has determined that an |

| Comment/Date | Summary of Comments | Location of Where Environmental Issues Are Addressed in the EIR |
|---|---|---|
| No Date | ▶ EDH APAC expresses concern over waiving the Initial Study as part of the CEQA process<br>▶ Waiving the Initial Study would not afford the public, responsible agencies, and decision makers the opportunity for transparent analysis and disclosure of significant impacts and cost analysis<br>▶ CEQA requires an Initial Study be done by the lead agency for this level of project<br>▶ Request that the lead agency analyze/disclose why Dixon Ranch was rejected for not achieving financial neutrality resulting in significant cost to County, taxpayers<br>▶ Analyze how the project will differ regarding:<br>■ Onsite/Offsite traffic infrastructure<br>■ Utility and public service infrastructure<br>■ Cost of offsite regional infrastructure<br>■ Right-of-way needs<br>■ Safe traffic circulation<br>■ Incompatibility between the General Plan land use designation, zoning, and proposed zoning and General Plan Amendment<br>■ High density not supported by access requirements along Green Valley; concern regarding geometrics based on California Design Geometrics; emergency vehicle access on Lima and Highland View and pass through traffic<br>■ Costly topography to build in steep terrain<br>■ Subsurface water and springs<br>■ Wildlife corridors and habitat/biological resources eliminated<br>■ Historical/tribal sites lost<br>■ Pedestrian circulation needs on Green Valley Rd<br>■ Water entitlements<br>▶ The omission of the NOP regarding the General Plan Amendment from Agriculture to High Density Residential<br>▶ Utility and roadway rebuild costs and funding<br>▶ Utility infrastructure and alignments<br>▶ Offsite water improvements/offsite improvements<br>▶ Contracts with private roads and subdivisions<br>▶ Construction impacts regarding utilities, outages, noise, emergency vehicles, traffic circulation, wastewater<br>▶ Zone of benefits<br>▶ Traffic circulation/geometrics/infrastructure<br>▶ Fire suppression<br>▶ Drainage,, water supply, groundwater<br>▶ Public services, pedestrian facilities and infrastructure<br>▶ Conditions of approval<br>▶ Emergency evacuation, Emergency and vehicle access at County Rd approaches from Green Valley at entrance C and entrance A<br>▶ Community Region<br>▶ Trustee agencies/responsible agencies | EIR is clearly required for the project and has elected to not prepare an initial study as identified in the NOP.<br>Section 3.3, "Archaeological and Historical Cultural Resources"<br>Section 3.4, "Biological Resources"<br>Section 3.9, "Hydrology and Water Quality"<br>Section 3.10, "Land Use, Planning, Agriculture, and Forestry"<br>Section 3.11, "Noise and Vibration"<br>Section 3.13, "Public Services and Recreation"<br>Section 3.14, "Transportation"<br>Section 3.15, "Utilities and Service Systems"<br>Section 3.16, "Tribal Cultural Resources"<br>Section 3.17, "Wildfire and Evacuation"<br>Chapter 5, "Alternatives" |

| Comment/Date | Summary of Comments | Location of Where Environmental Issues Are Addressed in the EIR |
|---|---|---|
| | ▶ Parcel APN 126-150-023<br>▶ Accident data, design speeds, speed surveys<br>▶ Economic accountability | |
| El Dorado Hills Community Services District (District)<br>March 5, 2024 | The District submits the following comments regarding the project:<br>▶ Parkland dedication and impact fee requirements<br>▶ Parkland dedication and development standards<br>▶ Land suitable for parkland dedication<br>▶ Annexation into the District's Master Community Facilities District | Section 3.13, "Public Services and Recreation" |
| Lieutenant Eric Palmberg<br>El Dorado County Sheriff's Office Support Services Division<br>March 20, 2024 | The commenter states that the El Dorado County Sheriff's Office has no law enforcement concerns related to this project | Section 3.13, "Public Services and Recreation" |
| El Dorado Irrigation District (District)<br>March 22, 2024 | The District provided the necessary offsite water supply improvements and the offsite wastewater conveyance improvements required for the project. | Section 3.15, "Utilities and Service Systems" |
| Jim Wassner<br>County Commission on Aging Housing Subcommittee<br>February 7, 2024 | The commenter expresses the following senior housing needs:<br>▶ Aging in place for multi-generational living<br>▶ Outdoor features to include trails for walking and riding | Comment not associated with the analysis in the EIR |
| El Dorado Hills Fire Department (EDHFD)<br>March 11, 2024 | The EDHFD provided a table that describes a review of the project's application in conformance with EDHFD standards, including conditions of approval that require structural fire protection and suppression services; natural hazard disclosure; and limits to development. In addition, the EDHFS provided requirements for the project to complete prior to the recordation of a parcel/subdivision map | Section 3.13, "Public Services and Recreation" |
| El Dorado Local Agency Formation Commission (LAFCO)<br>March 8, 2024 | LAFCO provided the following requirements for the project:<br>▶ Annexation into the El Dorado Irrigation District<br>▶ Annexation into the El Dorado Hills County Water District<br>▶ Annexation into the El Dorado Hills Community Services District<br>In addition, LAFCO requested that the project description include all annexations and spheres of influence amendments and that the Initial Study include the following analysis:<br>▶ Water supply, pumping, and treatment facilities<br>▶ Water quality/wastewater treatment issues<br>▶ Fire and emergency medical services<br>▶ Parks and recreation services<br>▶ Agricultural and open space<br>▶ Regional housing needs allocation goals | Chapter 2, "Project Description"<br>Section 3.13, "Population and Housing"<br>Section 3.13, "Public Services and Recreation"<br>Section 3.15, "Utilities and Service Systems" |
| El Dorado County Environmental Management Department (EMD)<br>March 8, 2024 | The EMD stated the following concerns and requirements for the project:<br>▶ Annexation and verification of the project into the El Dorado Irrigation District<br>▶ Obtain permits from the EMD to destroy the existing wells on the property | Chapter 2, "Project Description"<br>Section 3.6, "Geology, Soils, and Paleontological Resources"<br>Section 3.15, "Utilities and Service Systems" |

| Comment/Date | Summary of Comments | Location of Where Environmental Issues Are Addressed in the EIR |
|---|---|---|
| | ▶ Alternative means for potable water and sewage disposal if project is not annexed by El Dorado Irrigation District | |
| Greg Gaunt<br>February 28, 2024 | The commenter asked if the proposed water line that may be placed on the street he lives will be accessed by the residents of Green Valley Ranch | Chapter 2, "Project Description"<br>Section 3.17, "Utilities and Service Systems" |
| Justin Hall<br>March 11, 2024 | The commenter expressed the following concerns about the project:<br>▶ Traffic if Lima Way as an emergency access road is not gated and locked<br>▶ Speeding and how this will affect Lima Way (pass through traffic) if not gated and locked<br>▶ If Lima Way is not gated and locked, include an assessment on increased daily traffic, pedestrians (no sidewalks), public safety, noise, road wear/tear | Chapter 2, "Project Description"<br>Section 3.14, "Transportation"<br>Section 3.17, "Wildfire and Evacuation" |
| Teri Harness<br>March 23, 2024 | The commenter has the following concerns<br>▶ The NOP must accompany the Initial Study if there are significant impacts and not waive the Initial Study<br>▶ Lead agency must analyze and disclose why Dixon Ranch was reflected for not achieving financial neutrality<br>The commenter states that the project should identify how it will differ from the Dixon Ranch project regarding:<br>▶ Traffic infrastructure/circulation<br>▶ County studies, including traffic, geology, biological and wildlife, utilities and infrastructure, hydrology and drainage, and cost analysis<br>▶ Fire safety and evacuation routes, emergency vehicle access<br>▶ Asbestos identified<br>▶ Subsurface water, water entitlements<br>▶ Historical and tribal sites lost<br>▶ Pedestrian circulation/safety improvements | Pursuant to State CEQA Guidelines Section 15063(a), the County has determined that an EIR is clearly required for the project and has elected to not prepare an initial study as identified in the NOP.<br>Section 3.14, "Transportation"<br>Section 3.6, "Geology, Soils, and Paleontological Resources"<br>Section 3.4, "Biological Resources"<br>Section 3.15, "Utilities and Service Systems"<br>Section 3.9, "Hydrology and Water Quality"<br>Section 3.17, "Wildfire and Evacuation"<br>Section 3.2, "Air Quality"<br>Section 3.16, "Tribal Cultural Resources"<br>Section 3.3, "Archaeological and Historical Cultural Resources" |
| Matin Hoffman<br>March 5, 2024 | The commenter has concerns regarding:<br>▶ The use of Lima Way if not strictly limited to emergency vehicles and what will be the impact of traffic volume, roadway safety, noise, air quality along the Highland View subdivision<br>▶ The effect of utility work on the Highland View HOA<br>▶ Drainage into Highland View HOA<br>▶ Drinking water supply and temporary stoppage to Highland View HOA<br>▶ Wastewater management and if it will affect Highland View HOA<br>▶ Traffic impacts to emergency services on Lima Way | Chapter 2, "Project Description"<br>Section 3.13, "Public Services and Recreation"<br>Section 3.14, "Transportation"<br>Section 3.11, "Noise and Vibration"<br>Section 3.2, "Air Quality"<br>Section 3.15, "Utilities and Service Systems"<br>Section 3.9, "Hydrology and Water Quality" |

| Comment/Date | Summary of Comments | Location of Where Environmental Issues Are Addressed in the EIR |
|---|---|---|
| | ▶ The effect on wildlife corridor (deer, bobcat, fox, coyote population)<br>▶ The impact to Folsom Lake water quality during construction<br>▶ Effect of fire risk on surrounding homes<br>▶ Impacts to local schools and classroom sizes<br>▶ Air quality construction dust and hazardous airborne particulate materials | Section 3.4, "Biological Resources"<br>Section 3.17, "Wildfire and Evacuation" |
| Martin Hoffman<br>March 12, 2024 | The commenter states that several people are not able to get the zoom link to work for the Scoping Meeting | Not a comment on environmental issues. |
| Michael/Megan Johnson<br>March 10, 2024 | The commenters have identified the following impacts from the project that should be mitigated:<br>▶ The proposed evacuation route<br>▶ The proposed General Plan Amendment and Rezone<br>▶ Traffic impacts on Green Valley Rd<br>▶ Native tree destruction<br>▶ Naturally occurring asbestos | Section 3.17, "Wildfire and Evacuation"<br>Section 3.10, "Land Use, Planning" Agriculture, and Forestry Resources"<br>Section 3.14, "Transportation"<br>Section 3.4, "Biological Resources"<br>Section 3.2, "Air Quality" |
| Larry Keenan<br>March 26, 2024 | The commenter states that it is time to put a halt on future projects until the county deals with the limitations of Green Valley Rd regarding existing speeds, traffic, and accidents, and the county's inaction to reconciling these issues | Section 3.14, "Transportation" |
| Susan McClurg<br>March 24, 2024 | The commenter has the following concerns regarding the project:<br>▶ That there must be an Initial Study included with the NOP<br>▶ Traffic impacts on Green Valley Rd<br>▶ Fire safety<br>▶ Water supply infrastructure | Pursuant to State CEQA Guidelines Section 15063(a), the County has determined that an EIR is clearly required for the project and has elected to not prepare an initial study as identified in the NOP.<br>Section 3.14, "Transportation"<br>Section 3.17, "Wildfire and Evacuation"<br>Section 3.15, "Utilities and Service Systems" |
| Inbal Maoz and Stephen Nation<br>March 7, 2024 | The commenters have the following concerns regarding the project:<br>▶ The county's definition of an emergency access road; is this strictly emergency vehicles or a shortcut for pass through traffic; gated or locked; construction on Appian way may make project construction traffic circulation impacts unacceptable; traffic access through Aberdeen Ln; the impact on Silva Valley Pkwy and Green Valley Rd; impacts to local schools | Section 3.14, "Transportation"<br>Section 3.13, "Public Services and Recreation"<br>Section 3.17, "Wildfire and Evacuation" |
| Ray/Betty Peterson<br>March 24, 2024 | The commenter has the following concerns regarding the project:<br>▶ The need to include an Initial Study with the NOP<br>▶ The need to include a current traffic study to determine impacts on Green Valley Rd<br>▶ How emergency vehicle access will affect evacuation<br>▶ How wildlife will be impacted | Pursuant to State CEQA Guidelines Section 15063(a), the County has determined that an EIR is clearly required for the project and has elected to not prepare an initial study as identified in the NOP. |

| Comment/Date | Summary of Comments | Location of Where Environmental Issues Are Addressed in the EIR |
|---|---|---|
| | ▶ Operational noise impacts to proposed high density residential on surrounding neighborhood<br>▶ Construction noise impacts<br>▶ Lighting (street lighting, park lighting, lighting on lots)<br>▶ Aesthetics and the impact of the view of the proposed development on neighboring properties<br>▶ Utilities, the waterline's construction | Section 3.14, "Transportation"<br>Section 3.17, "Wildfire and Evacuation"<br>Section 3.4, "Biological Resources"<br>Section 3.11, "Noise and Vibration"<br>Section 3.1, "Aesthetics"<br>Section 3.17, "Utilities and Service Systems" |
| Michael La Deaux<br>March 11, 2024 | The commenter has the following concerns regarding the project:<br>▶ The project would be a drain on fire, police, and water<br>▶ How will water be obtained<br>▶ Why is Green Springs Ranch via Clarksville Rd being used?<br>▶ Concerns related to traffic impacts and substance abuse centers<br>▶ What jobs will this add? | Section 3.14, "Transportation"<br>Section 3.13, "Public Services and Recreation"<br>Section 3.17, "Utilities and Service Systems" |
| Bill/Ann Jeppesen<br>March 12, 2024 | The commenters have the following concerns regarding the project:<br>▶ The developer is in business to make a profit with the zone change; they should develop under the current Agriculture zoning<br>▶ Please add asbestos, traffic (emissions and noise), oak trees (heritage), Lima (guarantee that no public access is granted), wildlife habitat, water (cost and availability) | Section 3.2, "Air Quality"<br>Section 3.14, "Transportation"<br>Section 3.11, "Noise and Vibration"<br>Section 3.4, "Biological Resources"<br>Section 3.17, "Wildfire and Evacuation"<br>Section 3.15, "Utilities and Service Systems" |
| Jeremy Wilson<br>March 12, 2024 | The commenter has the following concerns regarding the project:<br>▶ East Green Springs Rd is privately owned as part of Green Springs Ranch and you may not legally dig and run water lines on m road<br>▶ Traffic on Green Valley Rd is already terrible (accidents occur regularly); the project would only make this worse | Section 3.14, "Transportation" |
| Michael Wilson<br>March 12, 2024 | The commenter has the following concerns regarding the project:<br>▶ Traffic on Green Valley Rd<br>▶ How does the county change the density so significantly?<br>▶ Impact on water for the area<br>▶ Impact on schools, fire, police, noise, wildfire | Section 3.14, "Transportation"<br>Section 3.10, "Land Use, Planning, Agriculture, and Forestry Resources:"<br>Section 3.15, "Utilities and Service Systems"<br>Section 3.13, "Public Services and Recreation" |
| Rick Book<br>March 12, 2024 | The commenter has the following concerns regarding the project:<br>▶ Opposition to the project based on the impact it will have on private roads; do the Initial Study, stop bypassing the process | Section 3.14, "Transportation" |
| Ann Roomel<br>March 13, 2024 | The commenter has the following concerns regarding the project:<br>▶ The transportation infrastructure being unable to accommodate 379 new homes<br>▶ Wildfire evacuation during the summer months | Section 3.14, "Transportation"<br>Section 3.17, "Wildfire and Evacuation" |

| Comment/Date | Summary of Comments | Location of Where Environmental Issues Are Addressed in the EIR |
|---|---|---|
| Jennifer Clute<br>March 14, 2024 | The commenter has concerns regarding the increase in traffic, public services emergency response times, water supplies after the project is built, fire risk increasing. | Section 3.14, "Transportation"<br>Section 3.13, "Public Services and Recreation"<br>Section 3.15, "Utilities and Service Systems"<br>Section 3.17, "Wildfire and Evacuation" |
| Judith Spaletta<br>March 22, 2024 | The commenter has concerns regarding the project's impacts on wildfire evacuation. | Section 3.17, "Wildfire and Evacuation" |
| Judith Spaletta<br>March 25, 2024 | The commenter is requesting confirmation that her comment letter was received | Not a comment on environmental issues. |
| Arlene Armes<br>March 12, 2024 | The commenter has the following concerns regarding the project:<br>▶ Incorrect signage identifying the project as the Dixon Ranch Project<br>▶ Wildlife animal impacts to bobcats, mountain lions, freshwater otters, deer, foxes, coyotes, bears, Canadian geese, and others<br>▶ Traffic circulation impacts | Section 3.4, "Biological Resources"<br>Section 3.14, "Transportation" |
| Larry Armes<br>March 12, 2024 | The commenter has the following concerns regarding the project:<br>▶ Traffic impacts, as Green Valley Rd is not designed for high density residential<br>▶ The project would bring an end to wildlife, more cars, more construction noise, more dust and pollution | Section 3.14, "Transportation"<br>Section 3.2, "Air Quality"<br>Section 3.4, "Biological Resources"<br>Section 3.11, "Noise and Vibration" |
| Eric Walder<br>March 26, 2024 | The commenter has the following concerns regarding the project:<br>▶ The county must prepare an Initial Study with the NOP for a project of this size and magnitude<br>▶ Although informational, the NOP and scoping meeting did not disclose the project in sufficient detail to fully understand the complete list of environmental impacts<br>▶ Whether there is a time limit for posting these project notices on the property or roadway<br>▶ Traffic infrastructure improvements<br>▶ Wildlife habitat laws, regulations, and best practices<br>▶ Fire evacuation routes and rate of evacuation details<br>▶ Is Green Valley Rd as the only unimpeded exit sufficient; explain why an unimpeded exit is not required to the south; label fire access roads | Pursuant to State CEQA Guidelines Section 15063(a), the County has determined that an EIR is clearly required for the project and has elected to not prepare an initial study as identified in the NOP.<br>Section 3.17, "Wildfire and Evacuation"<br>Section 3.14, "Transportation"<br>Section 3.4, "Biological Resources" |
| Eric Walder<br>March 26, 2024 | The commenter requests confirmation that the comment letter was received | Not a comment on environmental issues. |
| Ray Rasmussen<br>March 6, 2024 | The commenter has the following concerns regarding the project:<br>▶ Traffic issues<br>▶ Opening Lima Way to general traffic<br>▶ Green Valley Rd between Silva Valley and Francisco Blvd traffic is already bad and the project would make it worse | Section 3.14, "Transportation" |
| El Dorado County | ▶ Overview of requirements for water quality protection. | Section 3.9, "Hydrology and Water Quality" |

| Comment/Date | Summary of Comments | Location of Where Environmental Issues Are Addressed in the EIR |
|---|---|---|
| County of El Dorado Office of County Surveyor<br>March 5, 2024 | The County of El Dorado Office of County Surveyor includes the following comments:<br>▶ A final map package will need to be submitted with this office<br>▶ Survey monuments must be set prior to filing final map<br>▶ Roads serving the project shall be named and filed with the office, as will addressing the project site<br>▶ Prior to filing the final map, a letter will be required from all agencies that have placed conditions on the map and that these conditions have been satisfied<br>▶ All boundary monuments disturbed during construction shall be reset by a professional land surveyor | Not a comment on environmental issues. |
| Aileen/Jeff Tewksbury<br>March 24, 2024 | The commenters have the following concerns regarding the project:<br>▶ The General Plan Amendment and zone change<br>▶ No benefit to community<br>▶ Increased traffic on Green Valley Rd, traffic impacts to Hwy 50, stop lights on Green Valley Rd and Deer Valley<br>▶ Increased road noise, noise pollution<br>▶ Light pollution<br>▶ Air pollution<br>▶ Impact on endangered animal species<br>▶ Watter supply issues, fire hydrant connections, fire gates, disruption of current Creek and proper drainage, El Dorado Irrigation District hook up access<br>▶ Boundary easements<br>▶ Public transportation access<br>▶ Emergency access onto private roads (is this legal?)<br>▶ Landscaping buffer, long-term maintenance of boundaries, fencing<br>▶ Restriction of two-story housing, quality of visual open space, lot configurations, no mention of planned ADU and ADU enforcement | Section 3.10, "Land Use, Planning, Agriculture, and Forestry Resources"<br>Section 3.14, "Transportation"<br>Section 3.1, "Aesthetics"<br>Section 3.2, "Air Quality"<br>Section 3.4, "Biological Resources"<br>Section 3.17, "Utilities and Service Systems"<br>Section 3.9, "Hydrology and Water Quality"<br>Section 3.17, "Wildfire and Evacuation" |
| Dale Gretzinger<br>No Date | The commenter has concerns regarding the traffic noise the project would create concerns over the rezoning from Agriculture to High Density Residential, traffic entry/exit from Loch Way to Green Valley Rd, air quality, water, and fire safety | Section 3.11, "Noise and Vibration"<br>Section 3.10, Land Use, Planning, Agriculture, and Forestry Resources"<br>Section 3.2, "Air Quality"<br>Section 3.15, "Utilities and Service Systems"<br>Section 3.17, "Wildfire and Evacuation" |
| Native American Heritage Commission<br>April 12, 2024 | The comment letter provide guidance on tribal consultation processes under Senate Bill 18 and Assembly Bill 52. | Section 3.16, "Tribal Cultural Resources" |
| California Department of Transportation (Caltrans)<br>May 9, 2024 | The commenter identifies the need for the project to have a vehicle miles traveled analysis and evaluate pedestrian, bicycle, and transit uses. The comment letter also recommends that a queueing analysis of the | Section 3.14, "Transportation" |

| Comment/Date | Summary of Comments | Location of Where Environmental Issues Are Addressed in the EIR |
|---|---|---|
| | Highway 50 interchanges with Bass Lake Road and Silva Valley Parkway be conducted. | |
| Central Valley Regional Water Quality Control Board<br>May 10, 2024 | The commenter identifies water quality and groundwater issues that should be addressed and applicable state regulations involving water resources. | Section 3.9, "Hydrology and Water Quality" |

Pacific Gas and Electric Company

**Plan Review Team**
Land Management

PGEPlanReview@pge.com

February 23, 2024

Bianca Dinkler
County of El Dorado
2850 Fairlane Ct
Placerville, CA 95667

Ref: Gas and Electric Transmission and Distribution

Dear Bianca Dinkler,

Thank you for submitting the GPA22-0001 plans for our review. PG&E will review the submitted plans in relationship to any existing Gas and Electric facilities within the project area. If the proposed project is adjacent/or within PG&E owned property and/or easements, we will be working with you to ensure compatible uses and activities near our facilities.

Attached you will find information and requirements as it relates to Gas facilities (Attachment 1) and Electric facilities (Attachment 2). Please review these in detail, as it is critical to ensure your safety and to protect PG&E's facilities and its existing rights.

Below is additional information for your review:

1. This plan review process does not replace the application process for PG&E gas or electric service your project may require. For these requests, please continue to work with PG&E Service Planning: https://www.pge.com/en_US/business/services/building-and-renovation/overview/overview.page.

2. If the project being submitted is part of a larger project, please include the entire scope of your project, and not just a portion of it. PG&E's facilities are to be incorporated within any CEQA document. PG&E needs to verify that the CEQA document will identify any required future PG&E services.

3. An engineering deposit may be required to review plans for a project depending on the size, scope, and location of the project and as it relates to any rearrangement or new installation of PG&E facilities.

Any proposed uses within the PG&E fee strip and/or easement, may include a California Public Utility Commission (CPUC) Section 851 filing. This requires the CPUC to render approval for a conveyance of rights for specific uses on PG&E's fee strip or easement. PG&E will advise if the necessity to incorporate a CPUC Section 851filing is required.

This letter does not constitute PG&E's consent to use any portion of its easement for any purpose not previously conveyed. PG&E will provide a project specific response as required.

Sincerely,

Plan Review Team
Land Management

**Attachment 1 – Gas Facilities**

There could be gas transmission pipelines in this area which would be considered critical facilities for PG&E and a high priority subsurface installation under California law. Care must be taken to ensure safety and accessibility. So, please ensure that if PG&E approves work near gas transmission pipelines it is done in adherence with the below stipulations. Additionally, the following link provides additional information regarding legal requirements under California excavation laws: https://www.usanorth811.org/images/pdfs/CA-LAW-2018.pdf

1. Standby Inspection: A PG&E Gas Transmission Standby Inspector must be present during any demolition or construction activity that comes within 10 feet of the gas pipeline. This includes all grading, trenching, substructure depth verifications (potholes), asphalt or concrete demolition/removal, removal of trees, signs, light poles, etc. This inspection can be coordinated through the Underground Service Alert (USA) service at 811. A minimum notice of 48 hours is required. Ensure the USA markings and notifications are maintained throughout the duration of your work.

2. Access: At any time, PG&E may need to access, excavate, and perform work on the gas pipeline. Any construction equipment, materials, or spoils may need to be removed upon notice. Any temporary construction fencing installed within PG&E's easement would also need to be capable of being removed at any time upon notice. Any plans to cut temporary slopes exceeding a 1:4 grade within 10 feet of a gas transmission pipeline need to be approved by PG&E Pipeline Services in writing PRIOR to performing the work.

3. Wheel Loads: To prevent damage to the buried gas pipeline, there are weight limits that must be enforced whenever any equipment gets within 10 feet of traversing the pipe.

Ensure a list of the axle weights of all equipment being used is available for PG&E's Standby Inspector. To confirm the depth of cover, the pipeline may need to be potholed by hand in a few areas.

Due to the complex variability of tracked equipment, vibratory compaction equipment, and cranes, PG&E must evaluate those items on a case-by-case basis prior to use over the gas pipeline (provide a list of any proposed equipment of this type noting model numbers and specific attachments).

No equipment may be set up over the gas pipeline while operating. Ensure crane outriggers are at least 10 feet from the centerline of the gas pipeline. Transport trucks must not be parked over the gas pipeline while being loaded or unloaded.

4. Grading: PG&E requires a minimum of 36 inches of cover over gas pipelines (or existing grade if less) and a maximum of 7 feet of cover at all locations. The graded surface cannot exceed a cross slope of 1:4.

5. Excavating: Any digging within 2 feet of a gas pipeline must be dug by hand. Note that while the minimum clearance is only 24 inches, any excavation work within 24 inches of the edge of a pipeline must be done with hand tools. So to avoid having to dig a trench entirely with hand tools, the edge of the trench must be over 24 inches away. (Doing the math for a 24 inch

wide trench being dug along a 36 inch pipeline, the centerline of the trench would need to be at least 54 inches [24/2 + 24 + 36/2 = 54] away, or be entirely dug by hand.)

Water jetting to assist vacuum excavating must be limited to 1000 psig and directed at a 40° angle to the pipe. All pile driving must be kept a minimum of 3 feet away.

Any plans to expose and support a PG&E gas transmission pipeline across an open excavation need to be approved by PG&E Pipeline Services in writing PRIOR to performing the work.

6. Boring/Trenchless Installations: PG&E Pipeline Services must review and approve all plans to bore across or parallel to (within 10 feet) a gas transmission pipeline. There are stringent criteria to pothole the gas transmission facility at regular intervals for all parallel bore installations.

For bore paths that cross gas transmission pipelines perpendicularly, the pipeline must be potholed a minimum of 2 feet in the horizontal direction of the bore path and a minimum of 24 inches in the vertical direction from the bottom of the pipe with minimum clearances measured from the edge of the pipe in both directions. Standby personnel must watch the locator trace (and every ream pass) the path of the bore as it approaches the pipeline and visually monitor the pothole (with the exposed transmission pipe) as the bore traverses the pipeline to ensure adequate clearance with the pipeline. The pothole width must account for the inaccuracy of the locating equipment.

7. Substructures: All utility crossings of a gas pipeline should be made as close to perpendicular as feasible (90° +/- 15°). All utility lines crossing the gas pipeline must have a minimum of 24 inches of separation from the gas pipeline. Parallel utilities, pole bases, water line ‘kicker blocks’, storm drain inlets, water meters, valves, back pressure devices or other utility substructures are not allowed in the PG&E gas pipeline easement.

If previously retired PG&E facilities are in conflict with proposed substructures, PG&E must verify they are safe prior to removal. This includes verification testing of the contents of the facilities, as well as environmental testing of the coating and internal surfaces. Timelines for PG&E completion of this verification will vary depending on the type and location of facilities in conflict.

8. Structures: No structures are to be built within the PG&E gas pipeline easement. This includes buildings, retaining walls, fences, decks, patios, carports, septic tanks, storage sheds, tanks, loading ramps, or any structure that could limit PG&E’s ability to access its facilities.

9. Fencing: Permanent fencing is not allowed within PG&E easements except for perpendicular crossings which must include a 16 foot wide gate for vehicular access. Gates will be secured with PG&E corporation locks.

10. Landscaping: Landscaping must be designed to allow PG&E to access the pipeline for maintenance and not interfere with pipeline coatings or other cathodic protection systems. No trees, shrubs, brush, vines, and other vegetation may be planted within the easement area. Only those plants, ground covers, grasses, flowers, and low-growing plants that grow unsupported to a maximum of four feet (4’) in height at maturity may be planted within the easement area.

11. Cathodic Protection: PG&E pipelines are protected from corrosion with an “Impressed Current” cathodic protection system. Any proposed facilities, such as metal conduit, pipes, service lines, ground rods, anodes, wires, etc. that might affect the pipeline cathodic protection system must be reviewed and approved by PG&E Corrosion Engineering.

12. Pipeline Marker Signs: PG&E needs to maintain pipeline marker signs for gas transmission pipelines in order to ensure public awareness of the presence of the pipelines. With prior written approval from PG&E Pipeline Services, an existing PG&E pipeline marker sign that is in direct conflict with proposed developments may be temporarily relocated to accommodate construction work. The pipeline marker must be moved back once construction is complete.

13. PG&E is also the provider of distribution facilities throughout many of the areas within the state of California. Therefore, any plans that impact PG&E’s facilities must be reviewed and approved by PG&E to ensure that no impact occurs which may endanger the safe operation of its facilities.

## Attachment 2 – Electric Facilities

It is PG&E's policy to permit certain uses on a case by case basis within its electric transmission fee strip(s) and/or easement(s) provided such uses and manner in which they are exercised, will not interfere with PG&E's rights or endanger its facilities. Some examples/restrictions are as follows:

1. Buildings and Other Structures: No buildings or other structures including the foot print and eave of any buildings, swimming pools, wells or similar structures will be permitted within fee strip(s) and/or easement(s) areas. PG&E's transmission easement shall be designated on subdivision/parcel maps as "**RESTRICTED USE AREA – NO BUILDING."**

2. Grading: Cuts, trenches or excavations may not be made within 25 feet of our towers. Developers must submit grading plans and site development plans (including geotechnical reports if applicable), signed and dated, for PG&E's review. PG&E engineers must review grade changes in the vicinity of our towers. No fills will be allowed which would impair ground-to-conductor clearances. Towers shall not be left on mounds without adequate road access to base of tower or structure.

3. Fences: Walls, fences, and other structures must be installed at locations that do not affect the safe operation of PG&'s facilities. Heavy equipment access to our facilities must be maintained at all times. Metal fences are to be grounded to PG&E specifications. No wall, fence or other like structure is to be installed within 10 feet of tower footings and unrestricted access must be maintained from a tower structure to the nearest street. Walls, fences and other structures proposed along or within the fee strip(s) and/or easement(s) will require PG&E review; submit plans to PG&E Centralized Review Team for review and comment.

4. Landscaping: Vegetation may be allowed; subject to review of plans. On overhead electric transmission fee strip(s) and/or easement(s), trees and shrubs are limited to those varieties that do not exceed 10 feet in height at maturity. PG&E must have access to its facilities at all times, including access by heavy equipment. No planting is to occur within the footprint of the tower legs. Greenbelts are encouraged.

5. Reservoirs, Sumps, Drainage Basins, and Ponds: Prohibited within PG&E's fee strip(s) and/or easement(s) for electric transmission lines.

6. Automobile Parking: Short term parking of movable passenger vehicles and light trucks (pickups, vans, etc.) is allowed. The lighting within these parking areas will need to be reviewed by PG&E; approval will be on a case by case basis. Heavy equipment access to PG&E facilities is to be maintained at all times. Parking is to clear PG&E structures by at least 10 feet. Protection of PG&E facilities from vehicular traffic is to be provided at developer's expense AND to PG&E specifications. Blocked-up vehicles are not allowed. Carports, canopies, or awnings are not allowed.

7. Storage of Flammable, Explosive or Corrosive Materials: There shall be no storage of fuel or combustibles and no fueling of vehicles within PG&E's easement. No trash bins or incinerators are allowed.

8. Streets and Roads: Access to facilities must be maintained at all times. Street lights may be allowed in the fee strip(s) and/or easement(s) but in all cases must be reviewed by PG&E for proper clearance. Roads and utilities should cross the transmission easement as nearly at right angles as possible. Road intersections will not be allowed within the transmission easement.

9. Pipelines: Pipelines may be allowed provided crossings are held to a minimum and to be as nearly perpendicular as possible. Pipelines within 25 feet of PG&E structures require review by PG&E. Sprinklers systems may be allowed; subject to review. Leach fields and septic tanks are not allowed. Construction plans must be submitted to PG&E for review and approval prior to the commencement of any construction.

10. Signs: Signs are not allowed except in rare cases subject to individual review by PG&E.

11. Recreation Areas: Playgrounds, parks, tennis courts, basketball courts, barbecue and light trucks (pickups, vans, etc.) may be allowed; subject to review of plans. Heavy equipment access to PG&E facilities is to be maintained at all times. Parking is to clear PG&E structures by at least 10 feet. Protection of PG&E facilities from vehicular traffic is to be provided at developer's expense AND to PG&E specifications.

12. Construction Activity: Since construction activity will take place near PG&E's overhead electric lines, please be advised it is the contractor's responsibility to be aware of, and observe the minimum clearances for both workers and equipment operating near high voltage electric lines set out in the High-Voltage Electrical Safety Orders of the California Division of Industrial Safety (https://www.dir.ca.gov/Title8/sb5g2.html), as well as any other safety regulations. Contractors shall comply with California Public Utilities Commission General Order 95 (http://www.cpuc.ca.gov/gos/GO95/go_95_startup_page.html) and all other safety rules. No construction may occur within 25 feet of PG&E's towers. All excavation activities may only commence after 811 protocols has been followed.

Contractor shall ensure the protection of PG&E's towers and poles from vehicular damage by (installing protective barriers) Plans for protection barriers must be approved by PG&E prior to construction.

13. PG&E is also the owner of distribution facilities throughout many of the areas within the state of California. Therefore, any plans that impact PG&E's facilities must be reviewed and approved by PG&E to ensure that no impact occurs that may endanger the safe and reliable operation of its facilities.

Pacific Gas and Electric Company

**Plan Review Team**
Land Management

PGEPlanReview@pge.com

March 7, 2024

Bianca Dinkler
County of El Dorado
2850 Fairlane Ct
Placerville, CA 95667

Re: GPA22-0001
Generations at Green Valley

Dear Bianca Dinkler,

Thank you for providing PG&E the opportunity to review the proposed plans for GPA22-0001 dated 2/22/2024. Our review indicates the proposed improvements do not appear to directly interfere with existing PG&E facilities or impact our easement rights.

Please note this is our preliminary review and PG&E reserves the right for additional future review as needed. This letter shall not in any way alter, modify, or terminate any provision of any existing easement rights. If there are subsequent modifications made to the design, we ask that you resubmit the plans to the email address listed below.

If the project requires PG&E gas or electrical service in the future, please continue to work with PG&E's Service Planning department: https://www.pge.com/cco/.

As a reminder, before any digging or excavation occurs, please contact Underground Service Alert (USA) by dialing 811 a minimum of 2 working days prior to commencing any work. This free and independent service will ensure that all existing underground utilities are identified and marked on-site.

If you have any questions regarding our response, please contact the PG&E Plan Review Team at pgeplanreview@pge.com.

Sincerely,

PG&E Plan Review Team
Land Management

| | |
|---|---|
| **From:** | Lori Alireza |
| **To:** | PB-Generations at Green Valley |
| **Cc:** | Hass naturalintentionsinc.com |
| **Subject:** | Enviromental Impact Report |
| **Date:** | Monday, February 26, 2024 5:21:45 PM |

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Hi Bianca,

I am resident of 2885 Aberdeen Lane in EDH. I received the report today in the mail and have a question about the access into our residential neighborhood.

Is this very large subdivision planning on using Lima Way as one of the access roads to almost 400 homes? How many entrances and exits are in the planning?

It was my understanding that Lima Way was going to a fire access road only and would be gated and locked.

Please clarify.

Thank you,

*Lori Alireza*
*916-627-9129*

# SCOPING COMMENT CARD

**EL DORADO COUNTY PLANNING AND BUILDING DEPARTMENT**
**GENERATIONS AT GREEN VALLEY (GPA22-0001, Z22-0001, TM22-0001, DA24-0001)**
**EL DORADO HILLS FIRE STATION 85, 1050 WILSON BOULEVARD, EL DORADO HILLS, CA**
**MARCH 12TH, 2024**

IF YOU WOULD LIKE TO SUBMIT A WRITTEN STATEMENT REGARDING THE SCOPE AND CONTENT OF THE DRAFT EIR, PLEASE COMPLETE THE FOLLOWING INFORMATION AND COMMENT IN THE SPACE PROVIDED BELOW AND DROP IN THE WRITTEN COMMENT BOX. COMMENTS MAY ALSO BE SUBMITTED BY MAIL TO: EL DORADO COUNTY PLANNING AND BUILDING DEPARTMENT, PLANNING DIVISION, 2850 FAIRLANE COURT, PLACERVILLE, CA 95667, OR EMAIL: GENERATIONSATGREENVALLEY@EDCGOV.US

SCOPING COMMENTS MUST ARRIVE BY 5:00PM MARCH 26TH, 2024. PLEASE INCLUDE PROJECT NAME IN SUBJECT LINE: GENERATIONS AT GREEN VALLEY.

Name: RICK BOOK Organization:

Address: 2042 E. GREEN SPRINGS ROAD

Comment: I ADAMATLY OPPOSE THIS PROJECT BASED ON THE IMPACT IT WILL HAVE ON OUR PRIVATE ROADS

DO THE "INITIAL STUDY" STOP BYPASSING THE PROCESS

**California Department of Transportation**

DISTRICT 3
703 B STREET | MARYSVILLE, CA 95901-5556
(530) 821-8401
www.dot.ca.gov

May 9, 2024

GTS# 03-ED-2024-00301
SCH # 2024040463

Ms. Bianca Dinkler
Senior Planner
El Dorado County Planning Services
2850 Fairlane Court
Placerville, CA 95667

**Generations at Green Valley (GPA22-0001, 222-0001, TM22-0001, DA24-0001)**

Dear Ms. Dinkler,

Thank you for including the California Department of Transportation (Caltrans) in the review process for the project referenced above. We reviewed this local development for impacts to the State Highway System (SHS) in keeping with our mission, vision, and goals, some of which includes addressing equity, climate change, and safety, as outlined in our statewide plans such as the California Transportation Plan, Caltrans Strategic Plan, and Climate Action Plan for Transportation Infrastructure.

The project site is located in an unincorporated area of El Dorado County. Existing land uses in the project area consist of single-family residences and rural residential areas. The project site encompasses approximately 280 acres located on five current parcels, Assessor's Parcel Numbers (APN) 126-020-001, 126-020-002, 126-020-003, 126-020-004, and 126-150-023., California. A General Plan Amendment GPA22-0001, Zone Change Z22-0001, and Tentative Subdivision Map TM22-0001, to amend the General Plan land use designations from Low Density Residential (LDR), with approximately 1.4 acres designated Open Space associated with an existing Sacramento Municipal Utility District utility easement, to High Density Residential, LDR, and Public Facilities; and a Rezone from Residential Estate, Ten-Acre (RE-10), with the SMUD easement zoned as Recreational Facilities, Low Intensity, the proposed C-Drive extension area is Residential Estate, Five-Acre (RE-5), and the proposed A-Drive extension is RE-10, to Residential, Single-unit (R1), OS, Recreational Facilities, High Intensity , and RE-5; and a Tentative Subdivision Map to subdivide the project site into 379 residential lots, clubhouse lot, park site lot, 13 landscape lots, 9 open space lots, and 3 lots for project roadways. Age restrictions would apply to 214 of the residential lots. Proposed lot sizes would range from 6,000 square feet to 5.7 acres. Roadway access to the project would be provided through 2 main connections with Green Valley Road and 3 emergency

access roads connection to existing roadways along the project's boundary. The proposed development area of the project would be within the El Dorado Hills Community Region boundary. The project includes a Development Agreement DA24-0001. Based on the Notice of Preparation of a Draft Environmental Impact Report package provided, Caltrans has the following requests and recommendations:

**Freeway Operations/ Forecasting & Modeling**

This project requires a VMT-Focused Transportation Impact Study. Multimodal analysis including bike, pedestrian and mass transit must be included in the study. The 379 residential lot subdivision will increase queuing at the US-50/Bass Lake and the US-50/Silva Valley interchanges. Fair share contributions are required to offset traffic impacts.

Please provide our office with copies of any further actions regarding this project. We would appreciate the opportunity to review and comment on any changes related to this development.

If you have any questions regarding these comments or require additional information, please contact Satwinder Dhatt, Local Development Review Coordinator, by phone (530) 821-8261 or via email at satwinder.dhatt@dot.ca.gov.

Sincerely,

GARY ARNOLD, Branch Chief
Local Development Review and Complete Streets
Division of Planning, Local Assistance, and Sustainability
California Department of Transportation, District 3

**From:** Craig Campbell
**To:** PB-Generations at Green Valley
**Subject:** Generations At Green Valley
**Date:** Sunday, March 24, 2024 4:10:22 PM

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Scoping Comments

Generations at Green Valley

(GPS22-0001, Z22-0001, TM22-0001, DA24-0001)

March 24, 2024

I am Craig Campbell living at 3094 Aberdeen Lane El Dorado Hills, at the adjoining development of Highland View and I have the following concerns on the size and scope of the proposed development mentioned above.

1) Any emergency vehicle connection proposed at Lima Way at the top of Highland View be permanently blocked with gates for use by emergency vehicles only.

2) Highland view was granted a waiver for both degree of slope (17-18%) and for no need to put in sidewalks. We currently have a significant issue with cars speeding coming down hill which is a significant risk to the people who live and walk in the development and people wanting to pull out of driveways. Any additional traffic could prove fatal to the people who live in the development.

3) The large addition to the sewer line and the trenching required to tie in the line to the transfer station and the damage to the roads and the condition they would be left in.

4) The current construction method of construction of the existing sewer line is not adequate to deal with the new volume based off the huge, proposed size of this development.

5) We are doing an addition to our home and had to jump through hoops to not have to fire sprinkle our entire house to get the small addition approved due to the dramatic drop in water pressure to our home since it was built. The system since it was initially built has had a large number of homes added to it, very concerned about these sorts of issues, be it water, sewer or some other utility affecting our homes with no warning or mitigation being required by the new projects being attached to our current utility systems.

6) There should be a proper study of the huge costs required for this project, sewer, water, traffic, traffic mitigation that does not rely on the voters to hold the planning department and the developer to task to pay the full cost of a project of this impact and scale. We should get a full disclosure of all of the costs including administrative costs and who is paying for them as well.

7) I was involved in the Initial Dixon Ranch protests; this is the same project with a simple name change and very few project changes. Why must the voters rally every time a new project is presented. This is in the rural boundary which with little or no requirement of analysis should be dramatically limited to say maybe 100 homes? Just guessing on that number.

8) Less density would mitigate the huge loss of mature oaks that adds so much to our wildlife habitat and help maintain that rural feel and more closely match all the surrounding development and zoning.

9) High density at this location dramatically impacts the already dangerous Green Valley Road. Putting in some 55 and over housing is political theater, I'm over 55 and I can tell you while caring for my father his driving went downhill with age, everyone's will including my own. Planning to put a more aged population into this area where they must drive for services is a recipe for disaster. While people of all ages will buy these properties, goosing the number to the older range is specifically not helpful or safe to the general population that lives in the area.

10) One traffic mitigation I saw with Dixon and I would expect it is still part of the plan is to put a stop light at the bottom of Appian and Silva Valley Parkway. The back up at the stop sign is minimal at best, mostly when the HS and Middle School are about to be in session or released. The time currently at the stop sign is maybe 30 seconds. A stop light will steal a bit of everyone's life every day that they will never get back simply due to a selfish developer wanting to maximize the number of roofs in a very irresponsible way.

11) I I believe if you asked any voter in El Dorado Hills if they want us to look like the new housing south of 50 at Scott Road in Folsom, it would be a resounding NO. This development as proposed is exactly that. People on El Dorado Hills did not want the golf course developed to the tune of 91%. Keep in mind the golf course was one of the reasons Serrano got approved in the first place, so we should hold developers to their promises, if not a golf course, then certainly it should be open space.

12) Full engineering study must be completed that relies on actual engineering and not assumptions that are possibly flawed and later discovered. These costs for flaws are then passed on to the rate payers due to insufficient and poor assumptions on all of the aspects that are affected by a development of this scale.

13) Transparency is limited from what I saw, there can be no rush to approve a project while the public is not fully informed of it being proposed and its many impacts. I can tell you from walking my development that the vast majority of the residents think this project died with the voting down of the Dixon Ranch development for good cause.

14) My experience with going to meeting concerning Dixon Ranch there are always Traffic Mitigation Fees collected but they have long been spent elsewhere and no money currently exists to actually address the impacts of the project being actually considered, maybe that is due to the concern noted about flawed assumptions on other projects. If there were no flawed assumptions money for the project would be available right?

15) Water, a couple of years of better rain has not made water rights and water availability a concern of the past. Folsom south of 50 is building all of those houses with no certain water supply, EDH would be fighting with that group for water, and Folsom has the numbers to win. Think Southern California and them taking Northern California water, they have the bodies and the votes. I am not going to let my small lawn die because water sources were not secured prior to any sort of approval process for new development.

16) How did this get established as a Community Region surrounded by 10, 5, 1 and ½ acre lots get the highest density zoning without changing zoning and doing a general plan

amendment? The development of this density at that location with its limited access and resources available to that area is seemly criminally negligent.

17) The amount of concrete and paving required to build the proposed project would have a significant impact on stormwater runoff and water quality. Full engineering studies must be made to identify all of the impacts, I would expect flooding will be one of the major impacts as well as less recharging of the ground water for which so many of the surrounding properties rely on for their homes.

18) I have no illusions that this property will be developed someday but it must be developed in a much less impactful way. The density is just too high for the impacts on traffic, public safety, water, sewer, wildlife habitat and loss of mature oaks. Maybe after a complete engineering and CEQA study a maximum number of homes can be established for today and going forward for this location so then the money and time wasted by all parties on this matter can be limited. Development that is poor quality, like this proposed project, will be there to remind everyone in perpetuity should it be approved in its current form of how we need to be more sensitive to creating livable space for everyone. Thoughtful and deliberative fact-based decision making simply works, we should use some of that here in these circumstances.

| | |
|---|---|
| **From:** | Dan |
| **To:** | PB-Generations at Green Valley |
| **Cc:** | Planning Department |
| **Subject:** | GPA22-0001, questions |
| **Date:** | Tuesday, March 5, 2024 9:59:15 AM |

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Good Morning,

Dan Leemann here from Folsom/EDH.

Can you restate the zoom-link for the upcoming meeting on 3/12?
(hard to read in the letter).

Re Traffic on GV road:

Did I read correctly that the traffic section in the proposed project as just providing turn pockets for A and C Drive each?
It mentions save traffic flow, from my own personal experience, depending on daytime, traffic safety is borderline as it is!
Hence the question, when will GV road go 4 lane?

Will the EIR include Traffic analysis in the Transportation Section? IF not, I would like to request it here!
I believe strongly that Traffic on GV road will be **impacted SIGNIFICANTLY**.

Thanks in advance &
Best Regards

Dan

## TM22-0001 Generations at Green Valley March 11, 2024

Jim Wassner <jimwassner@gmail.com>

Tue 2/27/2024 8:28 AM

To:Bianca L. Dinkler <Bianca.Dinkler@edcgov.us>

1 attachments (133 KB)

COA Statement on Senior Housing Needs 08 2022.pdf;

Bianca,

Please include the following Agency comments from the County Commission on Aging.

Generations at Green Valley TM22-0001

This project notes the following:

1.) *Aging in place for multi-generational living is at the heart of this community... Age restrictions would apply to 214 of the 379 residential lots*.

Please note the attached Commission on Aging's Statement on Senior Housing Needs.

2.) *Outdoor features are planned to include meandering trails for walking and riding*.

Pedestrian paths are consistently rated by older adults as the most desired infrastructure feature to have in parks. Walking paths with marked distances provide users with an easy way to exercise. Paths should be wide enough to accommodate visitors who are pushing strollers or using wheelchairs. Public trails in El Dorado County have had issues for both walkers and cyclists due to their lack of width.

Just as it's important for growing children to exercise, it's incredibly important for older men and women to integrate a holistic fitness routine into their daily lives. Senior sports equipment strengthens the motor skills and manual dexterity of the elderly. They offer sensible forms of activity, which also enhances mental well-being. Equipment suitable for 8-year-olds and 60-year-olds, will be suitable for everyone. Please consider including an adequate amount of senior sports equipment and wider walking trails in the "meandering trails" you are planning.

Thank you in advance for your consideration,

Jim Wassner

County Commission on Aging

Housing Subcommittee

# *El Dorado County Commission on Aging Statement on Senior Housing Needs*

The EDC Commission on Aging is aware of the significant shortage of homes, both suitable and available, to our aging population. Ideally, mixed modes of housing-situations should bring a variety of options to Seniors to suit a variety of needs, preferences and incomes. Demographics will support an increased number of smaller and physically accessible modes of housing indefinitely.

Because of the intensity of the current shortage, we feel it is important to advocate for this category of homes as new housing proposals come on line in El Dorado County.

## *Criteria for Aging-friendly housing:*

### *Land planning and parcel sizes*

- *Modest sized lots ( 4,000 sq. ft to 8,000)*
- *800 to 1500 sq. ft. homes*
- *Minimal slopes eliminating need for exterior stairs*
- *Inclusionary-style planning (variety of SFR with duplex, triplex and 4 plexes)*
- *Accessible neighborhood walkways*
- *Guest parking pockets*
- *Not age-restricted*

### *Home size and configurations*

- *Single story*
- *Wider hallways*
- *Grab-bars included in bathrooms*
- *No interior steps ("sunken" levels)*
- *Garages at same level as home*
- *36" doors throughout*
- *Zero threshold front door.*
- *ADA size bathroom with roll-in shower and grab bars.*

Although the criteria listed above are ideal for the needs of our large and growing number of Seniors, these features are suitable and desirable for all age categories and would contribute to stable, healthy neighborhoods of the future.

- *For further information about the El Dorado County Commission on Aging Housing Subcommittee, contact:*

**Area Agency on Aging, Placerville Health and Human Services**
937 Spring Street, Placerville, CA 95667
Phone: (530) 621-6150

El Dorado County Commission on Aging
advocates for seniors present and future

March 5, 2024

THE HEART OF
EL DORADO HILLS
A COMMUNITY SERVICES DISTRICT

Bianca Dinkler, County Planner
bianca.dinkler@edcgov.us
El Dorado County Planning and Building Department
Planning Division
2850 Fairlane Court, Building C
Placerville, CA 95667

RE: **GPA22-0001, TM22-0001, DA24-0001, Z22-0001 – GENERATIONS AT GREEN VALLEY***(Green Valley Road Benefits, LLC, c/o TTLC Management Inc./Jenny Louie Helm, Wayland H. Louie and Jen Lynn Louie, Successor Trustee of the Fay Louie 2001 Living Trust; Kimberly Dixon, Amanda R., and Robert N. Pena)*

The El Dorado Hills Community Services District ("District") appreciates this opportunity to respond to the request to review and comment on the above referenced project. The District has reviewed the information provided involving the applicant's request for a General Plan Amendment, Zone Change, and Tentative Subdivision Map. Below are the District's comments and conditions to be addressed in the project.

## PER PROJECT APPLICATION

The Generations at Green Valley project proposes a General Plan Amendment, Zone Change, and Tentative Subdivision Map to amend the General Plan land use designations from Low Density Residential (LDR), with approximately 1.4 acres designated Open Space (OS) associated with an existing Sacramento Municipal Utility District (SMUD) utility easement, to High Density Residential (HDR), LDR, and Public Facilities (PF); and a Rezone from Residential Estate, Ten-Acre (RE-10), with the SMUD easement zoned as Recreational Facilities, Low Intensity (RF-L), the proposed C-Drive extension area is Residential Estate, Five-Acre (RE-5), and the proposed A-Drive extension is RE-10, to Residential, Single-unit (R1), OS, Recreational Facilities, High Intensity (RF-H), and RE-5; and a Tentative Subdivision Map to subdivide the project site into 379 residential lots, clubhouse lot, park site lot, thirteen (13) landscape lots, nine (9) open space lots, and three (3) lots for project roadways. Age restrictions would apply to 214 of the residential lots. The property, identified by Assessor's Parcel Number 126-020-001, 126-020-002, 126-020-003, 126-020-004, 126-150-023, consists of 280.70 acres, and is located on the south side of Green Valley Road approximately 100 feet southeast of the intersection with Malcom Dixon Road.

## PARKLAND DEDICATION & IMPACT FEE REQUIREMENTS

<u>El Dorado Hills District Policy 6110.10</u>
Per District Policy 6110.10, all subdividers of land within the District's jurisdiction shall dedicate park land suitable for active recreation use, or pay fees in lieu thereof (Quimby), or by District Board authorization, follow a combination of these alternatives.

Application of all Parkland Dedication requirements shall follow the El Dorado County Subdivision Ordinance and be consistent with the project.

The District's policies below provide the requirements for project development related to parkland dedication formulas and in-lieu options, as well as details regarding land **suitable** for acceptable parklands dedication:

## PARKLAND DEDICATION AND DEVELOPMENT STANDARDS

El Dorado Hills District Policy 6110.10
Park dedication amounts shall be determined as a result of a calculation based on the legislated rate of 5 acres per 1000 population project yield. The population is calculated at the rate of 3.3 persons for single family subdivisions and 2.1 for multi-family subdivisions on a per dwelling unit basis.

El Dorado Hills District Policy 6110.20
As an alternative to parkland dedication, where Quimby fees are paid in lieu of land dedication; the sum owed shall be determined by District staff by consulting with the County Assessor's Office, County Planning Department and/or an approved private appraiser, as authorized by ordinance.

El Dorado Hills District Policy 6110.30 and 6110.40
The amount of park land to be dedicated shall be calculated on the basis of the subdivision's dwelling unit yield as determined from the approved tentative map or the final map should the yield increase. Also, per District Policy 6110.40, staff shall inspect and evaluate all proposed park land dedications to determine the suitability of the subdivider's offering. **The District will confer jointly with the County to determine the amount of park land to be dedicated within the subdivision and its most suitable location. Please refer to District Policy 6110.60 regarding land suitability.**

The proposed tentative subdivision, as identified in the application materials creates 379 single-family dwelling units that yields a population of 1,250 persons. **Using the 5 acres per 1,000 persons formula, the required park land dedication to the EDHCSD is 6.25 acres of land.** As currently stated, the project proposes a public park of 4 acres. The applicant can also satisfy this requirement by way of Quimby fees paid in lieu of land dedication. When determining the land to dedicate to the District for parkland dedication, we ask that you review District Policy 6110.60, which references minimum size, topography requirements, easement limitations, park type (village versus neighborhood park), and drainage. The District is excited to work with the applicant on this Parkland Dedication process. Please reach out to me to initiate this process. Any parkland dedication agreements must **receive Board of Director's review and approval** prior to acceptance and processing by the General Manager.

## LAND SUITABLE FOR PARKLAND DEDICATION

El Dorado Hills District Policy 6110.60
Land suitable for dedication as an active recreation site (park land) shall include the following important elements to take into consideration:

1. Minimum desirable park site size is normally three (3) acres for purposes of economical maintenance and procuring adequate land for the development of multi-purpose fields.

2. Active recreational pursuits, such as team field sports, game courts, and activity buildings require predominantly level land, 2% slope. Land with a greater slope, up to 20% of the site, may be acceptable where it has utility for picnicking or other passive recreation activities and when it complements usable park area (2% slope) or when it appears consistent with uses proposed for a special purpose park site. All parks improved for active recreation purposes (i.e., ball fields, hard courts, etc.) shall be graded to a maximum 2% slope within areas proposed for such uses.

3. Site shall be free and clear of surface and overhead utility line easements which contain design, maintenance or operation constraints or place the public at unreasonable risk. Where easements unavoidably occur, only those compatible to the intended active recreation development, will be allowed for consideration as an acceptable dedication.

4. A neighborhood park, to the extent practicable, shall be centrally located within its residential service area and easily accessed by pedestrian or light vehicular traffic. Typical amenities include children's play apparatus, hard court, a multi-purpose turfed area and suitable landscaping.

5. Village/area parks shall generally provide recreation facilities needful by a larger community segment. These may be located on more significant transportation routes and shall furnish adequate parking. Ample hard courts, including tennis, larger field areas, group picnic facilities and a larger, more complex play apparatus for children, is customary.

6. Drainage courses, or dedications near or adjacent to hazardous or noxious material's sites are not acceptable. Flood plains are generally not accepted unless the site's potential risks are fully mitigated at the subdivider's risk and expense.

Private parks (neighborhood parks behind development gates) are eligible for a portion of parkland credit per County Subdivision Ordinance and District policy, and are not eligible for park impact fee reduction, as the park impact fee imposed is for public parks, not private parks.

**DISTRICT BOUNDARY**

Currently, the proposed project is outside both the District's boundary and Sphere of Influence (SOI). Considering this proposed development borders the existing service area for the District it is clear the District is best suited to provide Park and Recreation facilities and opportunities, as well as other District services. It is our belief that the County recognizes the importance of providing service to this significant development and that it also recognizes the District is in the best position to provide services. Therefore, annexation into the District's boundary is requested to be required as a Condition of Approval.

**COMMUNITY FACILITIES DISTRICT (CFD)**

Additionally, as a Condition of Approval, prior to the approval of the project's Final Map, annexation into the following Community Facilities Districts (CFDs) is required:

<u>El Dorado Hills Community Services District Master CFD 2019-01</u>

Annexation into the District's Master CFD 2019-01 will satisfy the requirement for participating in the funding of the ongoing maintenance of future parks, trails and pathways, open space, landscaping, lighting and other common or public areas owned/maintained by the District within the District's service boundary. Once the District's boundary is expanded the District will require the developer to expand and annex into CFD 2019-01.

For complete District Policy guidelines, please see Policy Guide Services 6000 – Facility Development on our website at www.eldoradohillscsd.org/about/administration-finance.html

Should you have any questions or comments regarding the concerns expressed in this letter, please contact me at (916) 614-3214.

Best regards,

Jeff Kernen

Jeff Kernen
Principal Planner
El Dorado Hills Community Services District

# EL DORADO HILLS FIRE DEPARTMENT

*"Serving the Communities of El Dorado Hills, Rescue and Latrobe"*

March 11, 2024

Bianca Dinkler Project Planner
El Dorado County Planning Department
2850 Fair Lane
Placerville, CA 95667

**PROJECT: GPA22-0001/Z22-0001, GENERATIONS AT GREEN VALLEY, APN:126-020-001 TO 004 & 126-150-023**

The El Dorado Hills Fire Department (EDHFD) has reviewed the above-referenced project application submittal, hereafter referenced as the "project". Our review of the application is intended to ensure this agency can provide fire and emergency medical services that are consistent with the El Dorado County General Plan, State Fire Safe Regulations, as adopted by El Dorado County, and the California Fire Code as amended locally.

This agency reviewed the application based on the following criteria provided by the applicant:

379 single family residential lots, 1 park lot, 1 clubhouse, 9 open space lots, 13 landscape lots, and 3 road lots.

See Table 1 that describes our review of the application in conformance with these standards.

**Table 1: El Dorado County General Plan Policies Related to Fire Protection**

| Policy | Topic | Standard | Does the Project Comply | | | Comments |
|---|---|---|---|---|---|---|
| | | | Yes | No | N/A | |
| 5.1.2.2 | Fire District Response | Community Region – 8-Minute Response to 80% of Population. | X | | | |
| 5.7.2.1 | Fire Protection | Sufficient emergency water supply, storage, and conveyance facilities for fire protection. Adequate access is provided. | | X | | See comments below |
| 6.2.1 | Defensible Space | Tentative maps shall be conditioned to attain and maintain defensible space. | | X | | Defensible space required |
| 6.2.2 | Limits to Development | Development in areas of moderate, high, and very high | | X | | Fire safe plan required |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | fire hazard areas shall have a WUI Fire Safe Plan. | | | | |
| 6.2.3 | Adequate Fire Protection | The development shall meet uniform fire protection standards. | | X | | See comments below |
| 6.2.4 | Area Wide Fire Management | Reduce fire hazards through cooperative fuel management activities. | | X | | See comments below |

**EDHFD GENERAL CONDITIONS OF APPROVAL SPECIFIC TO THIS PROJECT:**

1. **Structural Fire Protection and Suppression Services:** Consistent with California Code of Regulations Title 14 §1266.01, structural fire protection and suppression services will be available for this project by the El Dorado Hills Fire Department (EDHFD). The project is located within the service boundaries of EDHFD. The nearest staffed fire station to the project location is EDHFD Station No. 84 located at 2180 Francisco Drive, El Dorado Hills, CA 95762 in El Dorado Hills. The average response time to the project site from this fire station is approximately 8 minutes or less to 80% of the population in the area.

2. **Natural Hazard Disclosure:** The project is located in a **HIGH** Fire Hazard Severity Zone within a CAL FIRE Responsibility Area (SRA). The applicant shall provide a Wildfire Hazard Real Estate Disclosure to all future property owners regarding this risk.

3. **Limits to Development:** The project **IS** currently identified in an area of high or very-high wildland fire hazard or in an area identified as a wildland-urban interface (WUI) community within the vicinity of federal land that is a high risk of a wildfire.

**PRIOR TO THE RECORDATION OF PARCEL/SUBDIVISION MAP**

1. **Annexation**. Parcels 126020001, 126020002, 126020003, 126020004, 126150023, and any other parcels of this project located within the El Dorado Hills Fire Department service area or Sphere of Influence within El Dorado County that have not been annexed in this development shall annex into the El Dorado Hills County Water District (El Dorado Hills Fire Department) and pay all fees associated with that annexation. The annexation shall be in accordance with El Dorado LAFCO and the El Dorado Hills County Water District.

2. **Emergency Water Supply:** The project area **IS NOT** currently provided with an adequate means of emergency water supply, storage, or conveyance facilities. Prior to new buildings or structures being placed on one or more of these parcels, the applicant will need to demonstrate that they can meet the required emergency water supply provisions found in Chapter 5 of the California Fire Code, along with local ordinances and standards of EDHFD.

    a. Approved fire hydrants capable of providing the required fire flow for the protection of any and all structures shall be located along the fire apparatus access roadway. Fire hydrant quantities and locations shall be in accordance with the California Fire Code, as amended locally. The required fire hydrants shall be installed and operational prior to any construction (including foundations).

3. **Roads and Driveways:** Roads and driveways, whether public or private, shall comply with California Code of Regulations (CCR) Title 14 §§ 1270.00 - 1276.04 and California Code of Regulations Title 24 – Part 9 (CFC), Section 503 (Fire Apparatus Access Roads), as amended locally. The required fire access road(s) shall be installed prior to any construction (including foundations).

   **A minimum of 2 access/egress points shall be provided to the project. Access points shall be placed a distance apart equal to not less than one half the overall diagonal dimension of the area(s) to be served. Access/Egress point at Green Springs Road shall provide the required second access/egress, unless another location is deemed appropriate and is approved by the Fire Code Official. Separation of access points at Green Valley Road is not compliant.**

   **a.** Fire access roadways shall be of not less than 20 feet of unobstructed width, 15 feet of vertical clearance, and minimum turning radii of 40 feet inside and 56 feet outside dimensions on the improvement plans. The access roadway shall extend to within 150 feet of all portions of the exterior walls of the first story of any proposed building. **The use of turf-block or Grass-Crete or similar alternate road surfaces is not approved for installation in fire apparatus access roadways.**

   **b.** Fire apparatus access roads in excess of 150-feet in length shall be provided an approved fire apparatus turnaround. Fire apparatus turnarounds shall be in accordance with CCR Title 14 and EDHFD Standard B-003. Driveways in excess of 150 feet in length shall be provided with an approved turnout. Turnouts shall be in accordance with CCR Title 14.

   **c.** Fire access roadways shall be built to bear a minimum of 75,000 pounds and meet County Department of Transportation standards for roadways. A report, prepared by a registered geotechnical or California-licensed Civil engineer, verifying the ability of the road to bear the required minimum weight, shall be submitted with any plan indicating the construction of the roadway. Verification of constructed roadway shall be provided by a registered geotechnical or California-licensed Civil engineer prior to the final of the project.

   **d.** Where a bridge or elevated surface is part of a fire apparatus access road, the bridge shall be constructed and maintained in accordance with AASHTO HB-17.

   **e.** Traffic calming measures along fire access roads are prohibited unless approved by EDHFD.

   **f.** Gates or barriers across fire access roads or pedestrian egress shall be approved prior to installation and shall be in accordance with the California Fire Code and EDHFD Standards.

   **g.** When a road is required, it shall be named in accordance with the requirements identified by the County of El Dorado Surveyors Office. An approved street sign shall be placed at the entrance to the road.

   **h.** Fire Lane identification shall be provided along required fire access roadways. Fire Lane identification shall be in accordance with the California Vehicle Code and EDHFD Standards. Vehicle parking is prohibited on any street less than 30 feet in width. Vehicle parking is permitted on both sides of streets 40 feet or more in width. Roadway widths shall be measured between the gutter line or edge of pavement on opposite sides of the road. Identification of fire apparatus access roadways may be required on private roads.

i. All essential road and driveway improvements shall be complete and meet all of the requirements of CCR Title 14 and the California Fire Code prior to the approval of the final map for the project.

4. **Road Maintenance Agreement:** Provide Fire Access Roadway Maintenance Agreement (RMA), Road Association, or Zone of Benefit between all parcels connected to and served by a fire access roadway and/or driveway serving more than one parcel. The Fire Access Roadway Maintenance Agreement, Road Association, or Zone of Benefit shall be recorded with the El Dorado County Recorder's Office. The roadway maintenance agreement, Road Association, or Zone of Benefit shall include the following:

   a) Provisions for the necessary repair and maintenance of the roadway surface
   b) Removal of vegetation overgrowing the roadway and infringing on the roadway clear vertical height of fifteen feet (15') or width of twenty feet (20')
   c) Provisions for the maintenance, repair, and/or replacement of NO PARKING-FIRE LANE signage or striping
   d) Provisions for the necessary repair and maintenance of vehicle and pedestrian access gates and opening systems.

5. **Fire Protection Plan (Fire Safe Plan):** A preliminary fire protection plan shall be prepared to determine the acceptability of fire protection and life safety measures designed to mitigate wildfire hazards. The wildfire protection plan shall be in accordance with Chapter 49 of the California Fire Code and EDHFD standards. The applicant shall record a Notice of Restriction (NOR) that states that all lots illustrated in the final map shall adhere to the conditions of the applicable fire safe plan. The specific language of the NOR shall be approved by EDHFD prior to recordation.

6. **Community Facilities District:** In order to maintain certain services provided by the Department, which are impacted by the proposed development, including, but not limited to, fire protection and suppression, ambulance response services, emergency response services, administrative fees of the Department, and any other services permitted under the Mello-Roos Community Facilities Act of 1982, as amended, commencing with Section 53311 of the Government Code (the "Act"), as well as costs of administration, operating, and reporting, the Developer shall elect and provide for one (1) of three (3) financing options. The Developer can (i) form a new Community Facilities District ("CFD") subject to the review and approval of the Department, (ii) make a deposit and annex into any existing and approved Department CFD, or (iii) make a lump-sum payment for the present value of an annuity authorized by the Department. If the Developer chooses to create a new CFD or annex into an existing El Dorado Hills Fire Department CFD, the creation of the new CFD or the annexation into the existing El Dorado Hills Fire Department CFD shall be completed concurrently with final approval, as determined jointly by the Department and the County, of all land use entitlements requested by the landowner/applicant/developer.

**PRIOR TO THE ISSUANCE OF THE FINAL BUILDING PERMIT**

1. **Fire Protection Plan (Fire Safe Plan):** A final fire protection plan shall be prepared to determine the acceptability of fire protection and life safety measures designed to mitigate wildfire hazards. The wildfire protection plan shall be in accordance with Chapter 49 of the California Fire Code and EDHFD standards.

2. **Plan submittal (residential).** The applicant shall meet the following: Civil Site Plans and New Residential Building Plans shall be submitted and approved prior to Final Building Permit being issued. Fire Sprinkler plans shall be submitted prior to Final Building Permit being issued. Please note: EDHFD **does not** allow deferred submittals for Fire Sprinkler plans.

3. **Plan submittal (commercial).** The applicant shall meet the following: Civil Site Plans and Architectural Plans shall be submitted and approved prior to Final Building Permit being issued. Fire Sprinkler and Fire Alarm plans shall be submitted prior to Final Building Permit being issued. Please note: EDHFD **does not** allow deferred submittals for Fire Sprinkler or Fire Alarm plans.

4. **Roof Coverings:** Residential roof coverings shall consist of materials having a minimum Class A rating.

5. **New Buildings and Structures:** New buildings and structures placed on a parcel shall comply with all applicable fire safety regulations found in the California Code of Regulations Titles 14, 19, 24, and EDHFD ordinances and regulations.

   a. All parcels shall provide a minimum thirty (30) foot setback for all buildings from all property lines and/or the center of a road in accordance with California Code of Regulations Title 14 – Section 1276 (Setback for Structure Defensible Space).

   b. Residential structures, due to topography or parcel dimensions, that encroach the (30) foot setback shall be constructed to meet Insurance Institute for Business Home & Safety (IBHS) Wildfire Prepared Home certification.

6. **Open Space Fencing:** Lots that abut open space shall be required to utilize non-combustible type fencing abutting the open space.

**PRIOR TO GRANTING FINAL OCCUPANCY**

1. **Address (commercial).** All parcels shall be provided with an approved address number as issued by the County Surveyors Office. Approved numbers or addresses shall be placed on all new or existing buildings in such a position as to be easily read from the street or road fronting the property. The minimum size of the numbers shall not be less than eight (8) inches and shall be internally illuminated or mounted immediately adjacent to a light source and shall also contrast with their background.

2. **Address (residential).** All parcels shall be provided with an approved address number as issued by the County Surveyors Office. Approved numbers or addresses shall be placed on all new or existing buildings in such a position as to be easily read from the street or road fronting the property. The minimum size of the numbers shall not be less than four (4) inches. Address shall be internally illuminated or mounted immediately adjacent to a light source and shall also contrast with their background. When a residential building is located more than 150-feet from the provided road serving the residence, an address sign shall be placed at the driveway entrance onto the parcel. Remote address numbers shall be reflective and contrasting in color to the sign background, and with a number height of not less than four (4) inches and with a stroke width of 1/2-inch.

**Applicant:** It is highly recommended that specific requirements for your project be addressed with the Fire District during the planning stage. Specific requirements for bridges, fire hydrants, entry gates, and

access roadways shall be clearly understood and complied with. It is advisable to schedule a design review conference with the Fire District to provide clarification on specific requirements or to enquire about an Alternative Materials & Methods Request.

If this property is sold prior to development, the seller shall disclose the above requirements to the buyer.

EDHFD requirements are not to be construed as abrogating more restrictive requirements by other agencies having jurisdiction. Final acceptance is subject to field approval and completion of required tests.

**EDHFD reserves the right to update the following comments to comply with all current Codes, Standards, Local Ordinances, and Laws with respect to the official documented time of project application and/or building application to the County.** Any omissions and/or errors in respect to this letter, as it relates to the aforementioned codes, regulations, and plans, shall not be valid, and does not constitute a waiver to the responsible party of the project from complying as required with all Codes, Standards, Local Ordinances, and Laws.

Please do not hesitate to contact me at (916) 933-6623, Extension 1021 with any questions pertaining to the content of this review letter.



Chrishana Fields
Fire Marshal

**LOCAL AGENCY FORMATION COMMISSION**
550 Main Street, Suite E. Placerville, CA 95667
(530) 295-2707 · lafco@edlafco.us · www.edlafco.us

**VIA EMAIL**

March 8, 2024

Bianca Dinkler
El Dorado County Planning Services
2850 Fairlane Court
Placerville, CA 95667
bianca.dinkler@edcgov.us

RE: GPA22-0001, TM22-0001, DA24-0001, Z22-0001 – **Generations at Green Valley** (Green Valley Road Benefits, LLC)

Dear Ms. Dinkler,

Thank you for the opportunity to review and provide comments on the Generations at Green Valley Project[1]. LAFCO's State mandated role is to promote orderly growth and development, discourage urban sprawl while preserving open space and agricultural lands, and to encourage efficient service areas for local governments. To that end, LAFCO has reviewed the information relating to this project and would like to comment on the proposed development and necessary future services.

As indicated in the project application package, the proposed project will require essential municipal services from multiple service providers to support the proposed development. These services and their respective providers include water and wastewater, fire protection and emergency services, and park and recreation services. The project will require LAFCO approval for the following changes of organization prior to receiving these services:

- Annexation into the El Dorado Irrigation District (all parcels), consistent with EID's sphere of influence.
- Annexation into the El Dorado Hills County Water District (EDH Fire, all parcels), consistent with EDH Fire's sphere of influence, except for APN 126-020-004 (Tentative Map Lot I – Open Space), which does not appear to be within the sphere of influence of any fire protection provider. EDH Fire's sphere of influence would require amendment to add APN 126-020-004 prior to annexation.

[1] General Plan Amendment, Zone Change, and Tentative Subdivision Map to subdivide the project site into 379 residential lots, clubhouse lot, park site lot, 13 landscape lots, 9 open space lots, and 3 lots for project roadways. Age restrictions would apply to 214 of the residential lots. Proposed lot sizes would range from 6,000 square feet to 5.7 acres. Roadway access to the project would be provided through 2 main connections with Green Valley Road and 3 emergency access roads connection to existing roadways along the project's boundary. The property (APNs 126-020-001, 126-020-002, 126-020-003, 126-020-004, and 126-150-023), consists of 280.70 acres, and is located on the south side of Green Valley Road approximately 100 feet southeast of the intersection with Malcom Dixon Road, in the El Dorado Hills area, Supervisorial District 1.



COMMISSIONERS
Public Member: Bill Wilde • Alternate Public Member: Dawn Hodson
City Members: John Clerici, Tamara Wallace • Alternate City Member: Nicole Gotberg
County Members: John Hidahl, George Turnboo • Alternate County Member: Wendy Thomas
Special District Members: Brian Veerkamp, Timothy J. White • Alternate Special District Member: Michael Saunders
STAFF
Shiva Frentzen, Executive Officer • Erica Sanchez, Assistant Executive Officer
Malathy Subramanian, Commission Counsel

- Annexation into the El Dorado Hills Community Services District (all parcels), consistent with EDHCSD's sphere of influence.

Please include all above actions in the final terms and conditions of approval. LAFCO's approval process would occur after the County's approval process; however, please advise the Applicant to contact LAFCO sooner to schedule a pre-application meeting with staff.

LAFCO will also require an environmental review for the above actions; therefore, it is in the best interest of the Applicant and all parties if one CEQA document is prepared that covers all necessary processes. LAFCO respectfully requests that the project description include all annexations and sphere of influence amendments, and that the Initial Study and subsequent environmental document include robust analysis in the following areas:

**Water Supply, Pumping and Treatment Facilities:** Detailed description and analysis of all existing and planned on-site and off-site water facilities required for this project. Discussion of the potential water supply impacts that may occur as a result of the project, including how much water would be required to adequately serve this project, whether that water is currently projected to be available, the existing infrastructure that will be used to deliver service; the location, size and capacity of existing infrastructure, and how this water requirement will affect the overall water supply for the service area. The same scope of discussion should occur in regards to local pumping and treatment facilities: the location and size of the existing infrastructure of the nearest water treatment facility; existing capacity to serve the proposed project, or whether additional infrastructure will be required for pumping the water to the project site.

**Water Quality / Wastewater Treatment Issues:** Detailed analysis of all existing and planned on-site and off-site sewer facilities required for this project. The same scope of discussion and analysis for water issues should also be included for sewer treatment issues.

**Fire and Emergency Medical Services:** The proposed project's impact on fire and emergency services, adequacy of existing facilities and resources, facility or resource expansions necessary to serve the project, and the financial implications to EDH Fire. Identification of the location(s) of the nearest staffed fire station(s), current staffing levels, and estimated response time to the project area. Detailed analysis of the expected emergency medical service demands from the proposed project, with special attention given to the age-restricted housing component.

**Park and Recreation Services:** The proposed project's impact on parks and recreation services, including a discussion on the impacts on existing facilities and financial implications to the El Dorado Hills CSD. Issues associated with park and recreation services include a description of existing parks (neighborhood and regional) and recreation facilities in the vicinity, expected increases in park demands (service and usage), loss of open space, any new facilities or infrastructure needed to serve future residents of the proposed development, and payment of parkland in-lieu fees or dedication of new parkland.

**Agricultural and Open Space:** Discussion of existing agricultural and open space lands, including any reduction or loss of such lands, proposed measures to preserve open space within the project area or mitigation impacts to open space resources, and trails for public access.

**Regional Housing Needs Allocation Goals:** Identify the income category housing that the proposed development will provide and how that fits into the County's RHNA target goals for housing allocations in the very low, low, moderate, and above moderate-income categories.

Please continue to ensure that LAFCO is on the distribution list for any project notices, hearings, or decisions as this project moves through El Dorado County's development entitlement process. Once again, we thank you for giving LAFCO the opportunity to comment and we look forward to receiving additional materials in the future.

LAFCO staff can be reached at lafco@edlafco.us or (530) 295-2707 with any questions.

Sincerely,

Erica Sanchez
Assistant Executive Officer

cc: Green Valley Road Benefits, LLC
Mike Brink, El Dorado Irrigation District
Chief Maurice "Mo" Johnson, El Dorado Hills Fire
Mark Hornstra, El Dorado Hills Community Services District

# ENVIRONMENTAL MANAGEMENT DEPARTMENT

http://www.edcgov.us/EMD/


**PLACERVILLE OFFICE:**
2850 Fairlane Court
Placerville, CA 95667
(530) 621-5300
(530) 626-7130 Fax

**LAKE TAHOE OFFICE:**
924 B Emerald Bay Road
South Lake Tahoe, CA 96150
(530) 573-3450
(530) 542-3364 Fax


## INTEROFFICE MEMORANDUM

**TO:** **BIANCA DINKLER**, Project Planner
EDC Development Services Division

**FROM:** Environmental Management

**SUBJECT:** TM22-0001 GENERATIONS AT GREEN VALLEY

**DATE:** 3/8/2024

**CC:**

---

Environmental Management Department staff has reviewed the subject application. The following reflects our concerns and requirements:

**Environmental Health (Bryan Vyverberg x5924):**

This project proposes to create 379 residential lots, 1 park, and 1 clubhouse. An existing residence with a septic system and a well will remain, and two other existing wells will be destroyed.

Public water and sewer services are proposed for this project. A facilities improvement letter from the El Dorado Irrigation District stated that the project is not within the District boundary and will require annexation before public water and sewer services can be obtained from them.

Please obtain permits from this Department to destroy the existing wells on the property. Verification of annexation into the service area of the El Dorado Irrigation District will be required as part of this project. Alternative means for potable water and sewage disposal will be required that may impact minimum parcel size if this project cannot be annexed into the EID service area. New parcels that are serviced by a private water well and a septic system have a 5-acre minimum parcel size.

**Hazardous Materials (Mark Moss x6665):**

**Solid Waste Division (Timothy Engle x6587)**

**From:** Gaunt, Gregory
**To:** PB-Generations at Green Valley
**Subject:** Generations at Green Valley
**Date:** Wednesday, February 28, 2024 7:14:28 PM

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Hello,

My name is Greg Gaunt and I'm a resident of Green Springs Ranch. I received your notice of preparations draft today and noticed that a proposed water line may be placed on my street. Are residents of Green Valley Ranch going to have the ability to tap into this water source if/when placed for this new development?

**CONFIDENTIALITY NOTICE:** This e-mail message, including any attachments, is for the sole use of the intended recipient(s) and may contain confidential and privileged information or may otherwise be protected by law. Any unauthorized review, use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender by reply e-mail and destroy all copies of the original message and any attachment thereto.

Justin Hall
4045 Morningview Way
El Dorado Hills, Ca. 95762
916-798-8893
Jclarkhall12@gmail.com

March 11, 2024

Bianca Dinkler, Senior Planner
County of El Dorado Planning Department
2850 Fairlane Court, Building C
Placerville, Ca. 95667
generationsatgreenvalley@edcgov.us

Subject: Generations at Green Valley Project NOP Comment

Ms. Dinkler,

This letter is in response to the Notice of Preparation of an environmental impact report for the proposed "Generations at Green Valley" project. As a resident of the adjacent Highland Hills subdivision I have concerns with regard to the impact specifically on traffic in my neighborhood that this project could cause if the Lima Way emergency access road is not gated and locked. It is my recollection that for the previously planned Dixon Ranch community on this same property, the fire department specifically did not allow for a locked gate between the two neighborhoods.

Speeding is already a concern in Highlight Hills, and without a locked gate at Lima Way our neighborhood will be come a defacto shortcut to Silva Valley allowing Generations residents to bypass the already congested Green Valley Road.

If it is true in this instance that the Lima Way access would not be gated and locked, your environmental impact report should include an assessment of the impact to Highland Hills, including Increased daily traffic, pedestrians (we have no sidewalks), safety of children playing, noise, and road wear/tear.

Thank you for your time and consideration.



Justin Hall

**Martin D. Hoffman, MD, FACSM**
**4114 Morningview Way**
**El Dorado Hills, CA 95762**
**916-790-0554**
**md.hoffmanmd@gmail.com**

March 5, 2024

Bianca Dinkler, Senior Planner
County of El Dorado Planning Department
2850 Fairlane Court, Building C
Placerville, CA 95667
generationsatgreenvalley@edcgov.us

Subject: Generations at Green Valley Project NOP Comment

Dear Ms. Dinkler:

I write in response to the Notice of Preparation for preparation of an Environmental Impact Report for the proposed Generations at Green Valley Project. I write as a homeowner of the Highland View HOA. I am also the HOA Board president. While the timeline provided for response did not allow for an HOA Board meeting to occur prior to the deadline to generate a formal response from the Board, I believe that the concerns evident in this letter will be shared by other Board members and homeowners. You can anticipate a full Board response in the future when appropriate. We would appreciate appropriate notification.

I note that the county is forgoing an Initial Study. I request that the Initial Study be done for the public to have a thorough and complete unbiased presentation of all historically recognized impacts that the proposed project will generate.

Here are issues of concern that I wish to see addressed in your environmental impact report:

1. If use of access at Lima Way is not strictly limited to emergency vehicles, what will be the impact on traffic volume, roadway safety, noise, vehicle exhaust and roadway degradation along the access roads in the Highland View subdivision?
2. What effect and for what duration will utility work have on the roadways in the Highland View HOA?

3. What will be the effect of drainage into the Highland View HOA during and following completion of the project?
4. What will be the effect on drinking water supply, including temporary stoppage of the water supply to the Highland View HOA?
5. What effect will the project have on wastewater management and the need for system upgrades affecting the Highland View subdivision?
6. What will be the impact on roadway volume and safety from emergency vehicle access at Lima Way in the Highland View subdivision?
7. What will be the impact of the completed project on traffic flow along Green Valley and Silva Valley roads?
8. What will be the effect on the wildlife corridor, especially as related to the large deer population and the bobcat, fox and coyote population in the area?
9. What will be the impact on Folsom Lake water quality during construction?
10. What accessibility will nonresidents of the project have to the park within the project that is to be owned and maintained by the CSD?
11. What will be the potential effect on fire risk to surrounding homes during the construction phase of the project?
12. What will be the impact on local schools and classroom sizes?
13. What will be the impact of the project during construction on dust and potentially hazardous airborne particulate material?

Thank you for your attention to address these issues.

Sincerely,



Martin D. Hoffman, MD, FASCM

**From:** Martin Hoffman
**To:** PB-Generations at Green Valley
**Subject:** Zoom Link
**Date:** Tuesday, March 12, 2024 5:39:36 PM

---

Several of us are finding that the zoom link for the meeting does not work.

Martin D. Hoffman, MD

# SCOPING COMMENT CARD

**EL DORADO COUNTY PLANNING AND BUILDING DEPARTMENT**
**GENERATIONS AT GREEN VALLEY (GPA22-0001, Z22-0001, TM22-0001, DA24-0001)**
**EL DORADO HILLS FIRE STATION 85, 1050 WILSON BOULEVARD, EL DORADO HILLS, CA**
**MARCH 12TH, 2024**

IF YOU WOULD LIKE TO SUBMIT A WRITTEN STATEMENT REGARDING THE SCOPE AND CONTENT OF THE DRAFT EIR, PLEASE COMPLETE THE FOLLOWING INFORMATION AND COMMENT IN THE SPACE PROVIDED BELOW AND DROP IN THE WRITTEN COMMENT BOX. COMMENTS MAY ALSO BE SUBMITTED BY MAIL TO: EL DORADO COUNTY PLANNING AND BUILDING DEPARTMENT, PLANNING DIVISION, 2850 FAIRLANE COURT, PLACERVILLE, CA 95667, OR EMAIL: GENERATIONSATGREENVALLEY@EDCGOV.US

SCOPING COMMENTS MUST ARRIVE BY 5:00PM MARCH 26TH, 2024. PLEASE INCLUDE PROJECT NAME IN SUBJECT LINE: GENERATIONS AT GREEN VALLEY.

Name: BILL JEPPESEN Organization: HOME OWNER

Address: 2550 ABERDEEN LANE, EL DORADO HILLS, CA 95762

Comment: THANK YOU FOR THE MEETING AND ATTENTION TO COMMENTS.

THE CURRENT ZONING EXISTS FOR A REASON. THE DEVELOPER IS IN BUSINESS TO MAKE A PROFIT. THEY DO THE MATH. THEIR MISSION, GET THE ZONING CHANGED - SPEND AND MAKE MONEY. ALL OTHER WORDS AND CLAIMS ARE WINDOW DRESSING BY THE DEVELOPER. ALL OTHER ISSUES ARE ABOUT MONEY IF THEY CAN DEVELOP UNDER THE CURRENT ZONING, FINE.

# SCOPING COMMENT CARD

**EL DORADO COUNTY PLANNING AND BUILDING DEPARTMENT**
**GENERATIONS AT GREEN VALLEY (GPA22-0001, Z22-0001, TM22-0001, DA24-0001)**
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SCOPING COMMENTS MUST ARRIVE BY 5:00PM MARCH 26TH, 2024. PLEASE INCLUDE PROJECT NAME IN SUBJECT LINE: GENERATIONS AT GREEN VALLEY.

Name: Ann Jeppesen Organization: community

Address: 2550 Aberdeen Ln

Comment: Enviormental Scoping: Please address the following in repo
- ASBESTOS -
- TRAFFIC - emissions + NOISE
- Oak Trees - Heritage
- Lima - Guaranteed that NO public Access be granted
- W. Id Life Habitat
- WATER - COST + Availability

Date: March 10, 2024

To: Bianca Dinkler, Senior Planner

County of El Dorado Planning Department

2850 Fairlane Court, Building C

Placerville, CA. 95667

generationsatgreenvalley@edcgov.us

From: Michael and Megan Johnson

2857 Aberdeen Lane

El Dorado Hills, CA. 95762

Subject: Comments on the Generations at Green Valley proposed General Plan amendment, rezone and project Notice of Potential environmental impact (GPA22-0001, Rezone Z22-0001, and Tentative Subdivision Map TM22-00001). We are homeowners who live on Aberdeen Lane in the Highland View subdivision adjacent to the proposed project site. We have identified a number of environmental impacts from the proposed project that should be fully mitigated.

**Proposed Evacuation Route**

The proposed project includes an evacuation road that connects to Lima Way, a residential street, in the Highland View subdivision near our home. We purchased our home in this neighborhood in part because of the little traffic and less dense housing development that accentuates the natural surroundings. The proposed evacuation road has the potential to negatively impact the Highland View neighborhood if not fully gated to prevent non-emergency vehicle traffic and pedestrian access. Mitigation should include a full height and width gate that would prevent vehicles and pedestrians from entering the Highland View neighborhood except during an emergency situation. This access road should also not be used for construction equipment or material deliveries during construction.

**Proposed General Plan Amendment and Rezone**

We oppose the proposed General Plan amendment and rezone associated with the project. The project location is at the boundary of homes on a minimum of half acre lots transitioning to mini ranchettes of 10 acres. The current land use designation of low density residential and open space are consistent with the transition to rural county lands in the vicinity of the project. The proposal to amend the general Plan to High Density housing is inconsistent with all neighboring areas in this part of El Dorado Hills. In accordance with the current land designations, this project site can support 28 homes. The proposed project is looking to build 350+- residences. This represents a 1,250% increase in home density from the current zoning. The proposed density of development is inconsistent with the General Plan and

character of the surrounding area. Many residents living in this area chose the location because of rural feel of this part of El Dorado County. **The proposed General Plan Change and rezone should not be approved**. Development should occur within existing land use designations.

**Traffic Impacts on Green Valley Road**

Traffic on Green Valley Road is already at unacceptable levels of service. The traffic impacts from the proposed project on Green Valley Road will further degrade the safe flow of traffic in the area and will cause significant delays during peak hour traffic. The proposal includes the suggestion that traffic signal synchronization will mitigate the traffic impacts. This is laughable. Any project on this site should require the construction of a second lane on Green Valley Road from the project site to Francisco Boulevard in both directions. Additionally, a new traffic signal should be installed at Loch Way. Severe crashes have already occurred as cars attempting to enter Green Valley Road from Loch Way have been hit. If Green Valley Road were widened to two lanes in each direction and a signal installed at Loch Way, the traffic impacts would be mitigated for the proposed project.

**Native Tree Destruction**

The proposed subdivision map is situated on the lot in a way to cause the unnecessary take of a stand of native oak trees in the Northwest quadrant of the project site. The proposed housing density is already too dense and the trees could be saved by eliminating residential lots 360-370 adjacent to "G" Dr. and lots 16, 17. CEQA Guidelines call for environmental impacts to be minimized. Eliminating the identified lots will save the native trees.

**Naturally Occurring Asbestos**

The proposed project site is known to contain naturally occurring asbestos. Any construction on these parcels should require airborne asbestos monitoring during construction and a mitigation plan to prevent the disturbed asbestos from becoming airborne.

Thank you for the opportunity to comment of the proposed project. This proposal is simply trying to build too many homes on the project site and is inconsistent with the General Plan and character of the surrounding area. A proposal that significantly reduces the density of housing to existing land use designations, mitigates for the identified negative impacts and makes changes to better protect the natural environment would be more favorable to the current proposal.

Date: March 10, 2024

To: Bianca Dinkler, Senior Planner

County of El Dorado Planning Department

2850 Fairlane Court, Building C

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MARCH 11, 2024

BIANCA DINKLER, SENIOR PLANNER, EL DORADO COUNTY RE: GENERATIONS @GREEN VALLEY GPA22-001, REZONE Z22-001, TM22-001 FOR PUBLIC COMMENT

WHY A GENERAL PLAN, MEASURE Y WAS PASSED BY THE VOTERS

WHY THE NAME CHANGE FROM DIXON RANCH TO GENERATIONS @ GREEN VALLEY, IS IT TO CONFUSE AND DISGUISE?

THIS PROJECT WILL BE A DRAIN ON RESOURCES, FIRE POLICE, AND WATER ETC. HOW WILL THEY OBTAIN WATER? IN LOOKING AT THE SUBMITTED MAP IT SHOWS THEY WILL ACCESS GREEN SPRINGS RANCH VIA CLARKSVILLE ROAD. WHAT GIVES THEM THE RIGHT TO DO THIS?

THE SHERIFF ALREADY STATED THEY CANNOT SUPPORT THE SUBSTANCE ABUSE CENTER SLATED FOR DEER VALLEY ROAD

THE IMPACT ON TRAFFIC WILL BE CONSIDERABLE...WE ALREADY HAVE THE OAKHAVEN AND SUBSTANCE ABUSE CENTERS THAT WILL SUBSTANTIALLY INCREASE TRAFFIC...ALSO THE DEVELOPERS OF OAKHAVEN HAVE BEEN GRANTED A PASS ON INSTALLING A TRAFFIC SIGNAL AT DEER VALLEY AND GREEN VALLEY ROADS....GREEN VALLEY ROAD IS ALL READY DANGEROUS. IN 2010 ONE OF OUR RESIDENTS WAS SERIOUSLY INJURED IN A TRAFFIC ACCIDENT BECAUSE ROAD IMPROVEMENTS WERE NEGLECTED. A YEAR LATER A LEFT TURN LANE WAS INSTALLED TO IMPROVE THE SITUATION. A YEAR TOO LATE FOR THE INJURED PARTY. THE PROPER INFASTRUCTURE SHOULD BE INSTALLED AND NOT GIVEN A PASS ON THE REQUIREMENTS.

THE DEVELOPER HAS DECREASED THE LOTS FROM APPROXIMATELY 605 TO 379. IT SEEMS AS THOUGH THIS IS ALWAYS THE CASE. THEY COME IN WITH NUMBERS THEY KNOW WON'T BE APPROVED BUT SEE IF IT WILL STICK. AND THEN ASK WHAT WILL WORK.

WHAT LOCAL JOBS WILL THIS ADD? GENERALLY THE DEVELOPER USE THEIR OWN STAFF AND EMPLOYEES.

FINALLY, JOE HARN, EL DORADO COUNTY AUDITOR CONTROLLER STATED PREVIOUSLY THAT THIS DEVELOPMENT IS NOT GOOD FOR EL DORADO COUNTY.

WHAT MAKES IT GOOD NOW?

RESPECTFULLY

MICHAEL LA DEAUX

GREEN SPRINGS RANCH HOA PRESIDENT

LADEAUX @ ATT.NET

ATTACHMENT 1. VILLAGE LIFE, QUICK FIX 2. MAP OF PROPOSED DOMESTIC WATER

VILLAGE life

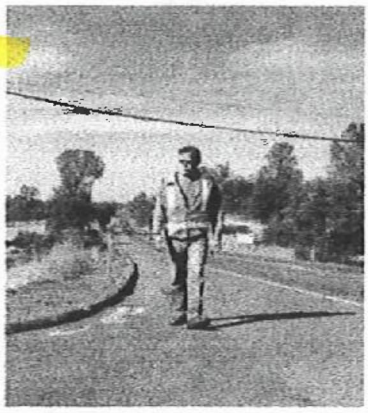
Feature Photos, News

# Dangerous Green Valley Road intersection may get 'quick fix'

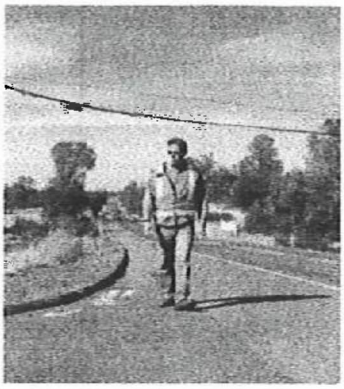
By Mike Roberts

The intersection where Deer Valley Road meets Green Valley Road has gained a dangerous reputation. Green Springs Ranch residents want El Dorado County officials to do something about it.

Last week District 1 Supervisor John Knight and county Department of Transportation Deputy Director Matt Smeltzer began dialogue with concerned residents of the semi-rural development, a community of 107 estate ranchettes that predates its southerly neighbor, Serrano, by a couple decades.



GREEN VALLEY RANCH ENTRANCE — Deputy DOT Director Matt Smeltzer surveys the intersection of Green Valley and Deer Valley Roads, at the entrance to Green Valley Ranch, trying to confirm there'ØØs enough room on the shoulder to squeeze in temporary turn lanes. The "quick fix"ØØ would protect left turners until the promised full-scale intersection improvement, currently planned for 2011. Village Life photo by Mike Roberts



GREEN VALLEY RANCH ENTRANCE – Deputy DOT Director Matt Smeltzer surveys the intersection of Green Valley and Deer Valley Roads, at the entrance to Green Valley Ranch, trying to confirm there'ØØs enough room on the shoulder to squeeze in temporary turn lanes. The "quick fix"ØØ would protect left turners until the promised full-scale intersection improvement, currently planned for 2011. Village Life photo by Mike Roberts

Access to the historic "ranch," as the residents call it, is through a gate on Deer Valley Road along a long straight stretch of Green Valley Road east of El Dorado Hills. A dangerous mix of high speeds and a hill to the east that blocks visibility and hinders acceleration to those exiting east has left residents feeling like they take their lives in their hands every time they leave the ranch.

"You can't see cars coming over the hill," said resident Tony Kopcych, who has made it his mission to get a safe solution after his wife suffered major injuries in the intersection three days after Christmas last year. "When you turn left onto Green Valley Road to go to El Dorado Hills or Folsom, they're on your butt."

While waiting to turn left onto Deer Valley Road, Shirley Kopcych's car was struck at an estimated 50 MPH from behind, forcing it into oncoming traffic, where it was again struck, this time broadside. Four people were injured, the worst being Shirley Kopcych, who was taken by helicopter to Roseville Trauma Center with several broken bones, a concussion, a damaged liver and multiple contusions. Medical bills are approaching a quarter million dollars thus far. The driver who struck her has $100,000 coverage, according to Tony.

A rare passing zone on Green Valley Road complicates matters; it's located directly west of the intersection, encouraging aggressive driving on rural-feeling road, he added. "Some of the people bearing down on us are in the wrong lane, going way over the speed limit."

The posted speed limit is 55 MPH.

After the accident Green Springs Ranch Landowners Association Secretary Ron Keil met with DOT Director Jim Ware and California Highway Patrol officials. He reported to the landowners association in February 2010 that Ware promised a long-planned widening of Green Valley Road in July would include turn lanes in both directions at the intersection but the project was subsequently pushed to 2011 as part of developer funded roadwork required for the

Silver Springs subdivision, which will also include a new, fully signalized intersection at the planned Silver Springs Parkway, east of Pleasant Grove Middle School.

Preliminary DOT statistics gathered by Keil showed 25 accidents and 27 injuries occurring at the intersection from 2001 through 2008.

Kopcych dug into CHP accident records and found that from 2000 to 2010 there were 78 accidents, with 52 injuries within a couple thousand feet of the intersection.

Many accidents were attributed to unsafe speed, improper passing or animals in the road – both deer and turkey are plentiful in the area. Green Springs Ranch residents provided Kopcych anecdotal family evidence of many accidents predating those statistics, including a fatal collision in the mid 1990s.

All of which led to Knight and Smeltzer attending the regular Green Springs Ranch Landowners Association meeting on Nov. 10 to explain the delay in long-promised intersection improvements and discuss a possible interim solution.

Residents, hoping to slow traffic on Green Valley Road, asked if the passing lane could be removed, or the speed limit lowered. Neither is practical, according to Smeltzer and Knight. Knight said he'd ask CHP for heightened enforcement in the area.

Knight assured the polite but concerned audience of about 30 landowners in the Pleasant Grove Middle School library that DOT now has the funding for the intersection improvements, so "It's not if, it's when."

All necessary right of way for the required road widening has been secured, Smeltzer said, adding that the project plans are "nearly final." He described a wider Green Valley Road with 400 feet of turn and deceleration lanes, 8-foot shoulders and bike lanes. The project weighs in at $700,000, he said.

Part of the delay was that the Silver Springs Parkway and Deer Valley Road intersection projects, both funded by the same developer, were combined for economic reasons, Smeltzer explained. The bid package is nearly complete. Construction is targeted for spring.

Smeltzer stopped short of promising that Deer Valley Road intersection improvements would be complete next year, given that two intersections are now included in the project. Because of the unconfirmed timing, he said, interim improvements can be considered.

Smeltzer described a short term fix proposed by retiring DOT Traffic Operations Superintendent Jim Imes that would use the existing shoulders to squeeze in a temporary turn lane. Smeltzer later said enhanced signage might be part of either short or long term safety solutions for the intersection.

Sensing the urgency in the room, Knight promised, "If we can do the quick fix, we'll do it." He committed to report back to the association within two weeks.

## *Green Springs Ranch has fun history*

Green Springs Ranch is one of the oldest documented pioneer settlements in El Dorado County, according to the Rescue Historical Society, which traces the community's roots to Rufus Hitchcock's Green Springs House — an inn and supply stop established in 1848 along the Old Coloma Road, a portion of which is still visible from the entrance.

William Dormody, a successful merchant and native of County Kilkenny, Ireland, purchased the approximately 1,000-acre Green Springs Ranch at auction in 1854 for $6,400. The ranch became a popular respite for travelers and a destination for weddings and other festivities.

In an early example of El Dorado Hills fortitude, the 60-year old Dormody took an 18-year-old bride in 1856 and proceeded to father eight children. Howard Greehalgh purchased the ranch from the Dormody estate in 1956 and subdivided it in 1976, leaving the Green Springs Ranch rural development on one of the largest parcels.

Published November 15, 2010 | Last Modified on March 2, 2011 at 1:47 pm

Tags: CHP, Green Valley Road, Jim Ware, printed, road construction

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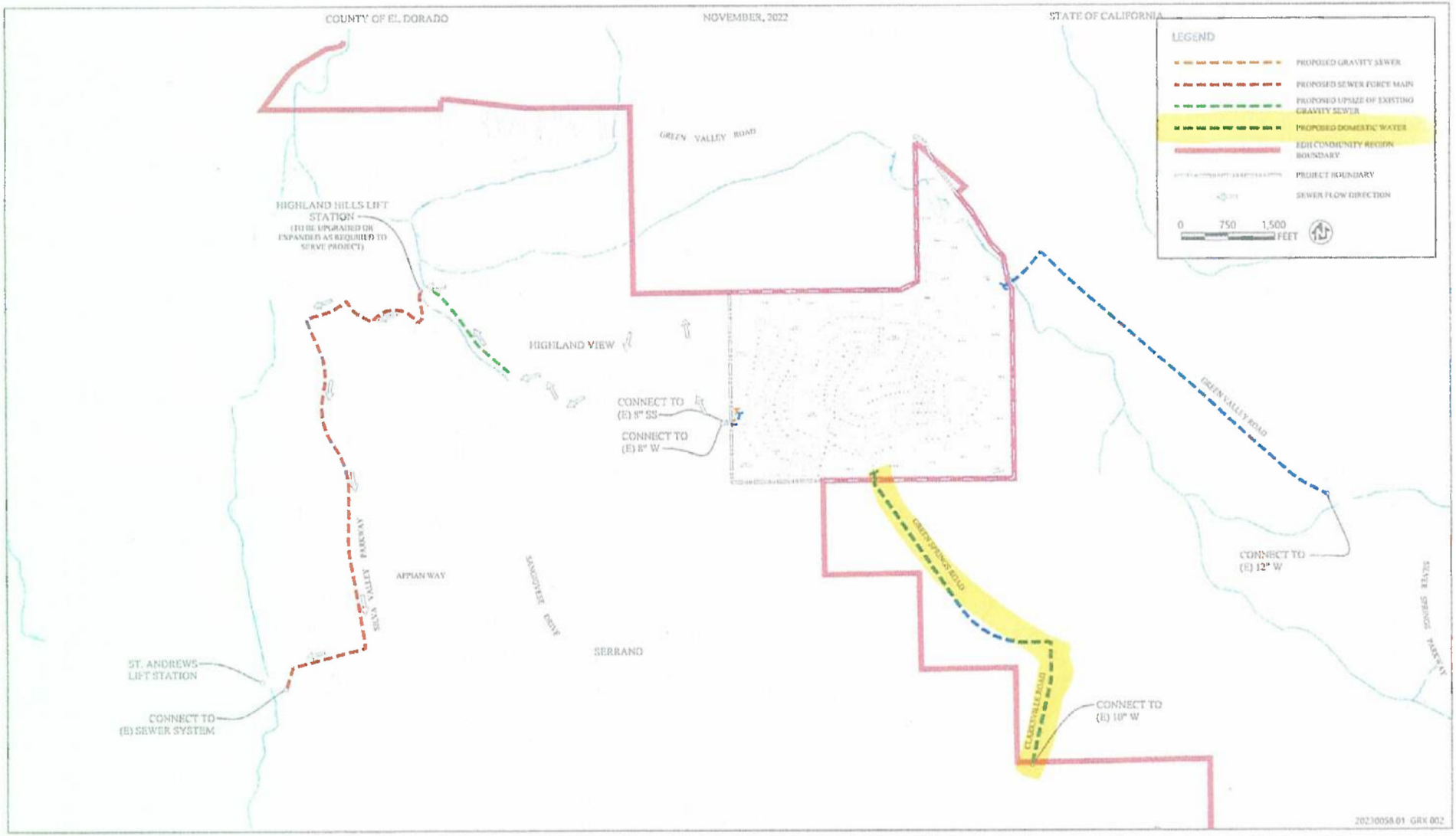
COUNTY OF EL DORADO
NOVEMBER, 2022
STATE OF CALIFORNIA
LEGEND
PROPOSED GRAVITY SEWER
PROPOSED SEWER FORCE MAIN
PROPOSED UPSIZE OF EXISTING GRAVITY SEWER
PROPOSED DOMESTIC WATER
EDH COMMUNITY REGION BOUNDARY
PROJECT BOUNDARY
SEWER FLOW DIRECTION
0 750 1,500 FEET
GREEN VALLEY ROAD
HIGHLAND HILLS LIFT STATION
(TO BE UPGRADED OR EXPANDED AS REQUIRED TO SERVE PROJECT)
HIGHLAND VIEW
CONNECT TO (E) 8" SS
CONNECT TO (E) 8" W
GREEN SPRINGS ROAD
CONNECT TO (E) 12" W
SILVA VALLEY PARKWAY
APPIAN WAY
SANGIOVESE DRIVE
SERRANO
SILVER SPRINGS PARKWAY
CLARKSVILLE ROAD
CONNECT TO (E) 10" W
ST. ANDREWS LIFT STATION
CONNECT TO (E) SEWER SYSTEM
20230058.01 GRX 002

| | |
|---|---|
| **From:** | Dan |
| **To:** | PB-Generations at Green Valley |
| **Cc:** | Planning Department |
| **Subject:** | GPA22-0001, questions |
| **Date:** | Tuesday, March 5, 2024 9:59:15 AM |

---

Good Morning,

Dan Leemann here from Folsom/EDH.

Can you restate the zoom-link for the upcoming meeting on 3/12?
(hard to read in the letter).

Re Traffic on GV road:

Did I read correctly that the traffic section in the proposed project as just providing turn pockets for A and C Drive each?
It mentions save traffic flow, from my own personal experience, depending on daytime, traffic safety is borderline as it is!
Hence the question, when will GV road go 4 lane?

Will the EIR include Traffic analysis in the Transportation Section? IF not, I would like to request it here!
I believe strongly that Traffic on GV road will be **impacted SIGNIFICANTLY**.

Thanks in advance &
Best Regards

Dan

# NATIVE AMERICAN HERITAGE COMMISSION

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April 12, 2024

Bianca Dinkler
El Dorado County Planning Services
2850 Fairlane Court
Placerville CA 95667

Governor's Office of Planning & Research

Apr 12 2024

STATE CLEARINGHOUSE

**Re: 2024040463, Generations at Green Valley (GPA22-001, Z22-0001, TM22-0001, DA24-0001) Project, El Dorado County**

Dear Ms. Dinkler:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements**. If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

**Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws**.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

**1.** Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

**2.** Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

**3.** Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

**4.** Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

**5.** Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

**6.** Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

**7.** Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

**a.** The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

**b.** A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

**8.** Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

**9.** Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

**10.** Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

**a.** Avoidance and preservation of the resources in place, including, but not limited to:

**i.** Planning and construction to avoid the resources and protect the cultural and natural context.

**ii.** Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

**b.** Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

**i.** Protecting the cultural character and integrity of the resource.

**ii.** Protecting the traditional use of the resource.

**iii.** Protecting the confidentiality of the resource.

**c.** Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

**d.** Protecting the resource. (Pub. Resource Code §21084.3 (b)).

**e.** Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

**f.** Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

**11.** Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

**a.** The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

**b.** The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

**c.** The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.

**b.** The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

**3.** Contact the NAHC for:

**a.** A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.

**b.** A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

**4.** Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

**a.** Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.

**b.** Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.

**c.** Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Pricilla.Torres-Fuentes@NAHC.ca.gov.

Sincerely,

Pricilla Torres-Fuentes

Pricilla Torres-Fuentes
Cultural Resources Analyst

cc: State Clearinghouse

Inbal Maoz & Stephen Nation
2637 Aberdeen Lane
El Dorado Hills, CA 95762
steve.nation74@gmail.com

March 7, 2024

Bianca Dinkler, Senior Planner
County of El Dorado Planning Department
2850 Fairlane Court, Building C
Placerville, CA 95667
generationsatgreenvalley@edcgov.us

Subject: Generations at Green Valley Project NOP Comment

Dear Ms. Dinkler,

Thank you for your letter dated February 23, 2024 regarding the NOP for the EIR for the Generations at Green Valley Project. We live on Aberdeen Lane in the Highland View development to the west of the Generations at Green Valley Project. Our specific concerns about this Project are as follows:

1. The map provided in your letter stated the main entrance for the Project would be from Green Valley Road with 3 Emergency Vehicle Access roads into the Project, one of which is via Lima Way (EVA-03) which connects to Aberdeen Lane.
    a. What is El Dorado County's definition of an emergency access road?
    b. Is this STRICTLY emergency vehicles only or will this become a shortcut for both construction traffic and then Generations at Green Valley Project residents?
    c. If this is STRICTLY for emergency vehicles only, what controls will be put in place to enforce this? Locked barriers? Or just a sign that people may ignore?
    d. There is already significant construction traffic on Appian Way that enters Serrano at Sangiovese Drive – Appian Way is effectively blocked at certain times of the day with construction traffic having to check-in at the Serrano security gate. This occurs with only a very small number of houses being constructed at any one time. If construction traffic heading to the Project were allowed to take Appian Way as well, this would be wholly unacceptable from both a traffic flow perspective as well as becoming an even greater safety issue.
    e. If any traffic (including emergency access) will go through Aberdeen Lane, this is a significant concern because there is already a major problem with cars speeding along this road and not stopping at stop signs. With plenty of small children and owners with pets using this street, we *cannot overemphasize what a major safety concern* additional traffic would be. Please keep in mind that there are NO SIDEWALKS on Aberdeen Lane, and that the steep grade of Aberdeen Lane significant increases the stopping distance for vehicles, especially larger vehicles. The steep grade also impairs

visibility to and from vehicles (especially when small children and pets are around).

2. What will be the impact on both Silva Valley Parkway and Green Valley Road which already have major traffic flow issues during peak times?
    a. What improvements will be made to these roads to deal with the increased traffic?

3. What improvements in terms of facilities and funding will be provided to local schools that will be affected by the Project and what effect will it have on class sizes?

In summary, we are very concerned that existing residential neighborhoods would potentially be impacted by the Project if certain controls are not put in place by the County. The County must ensure that traffic associated with the Project only use main roads to get to the Project and then enter the Project only through the main entrance – short cuts through existing neighborhoods must not be allowed (with the exception of emergency vehicles only, providing this restriction is strictly enforced).

Thank you for the opportunity to provide our feedback.

Best regards,

Inbal Maoz & Stephen Nation

| | |
|---|---|
| **From:** | Nikki Maoz |
| **To:** | PB-Generations at Green Valley |
| **Cc:** | Steve Nation |
| **Subject:** | Generations at Green Valley Project NOP Comment |
| **Date:** | Thursday, March 7, 2024 12:16:06 PM |
| **Attachments:** | Generations at Green Valley Project Feedback.pdf |

Dear Ms. Dinkler,

Thank you for your letter dated February 23, 2024 regarding the NOP for the EIR for the Generations at Green Valley Project. We live on Aberdeen Lane in the Highland View development to the west of the Generations at Green Valley Project. Our specific concerns about this Project are as follows:

1. The map provided in your letter stated the main entrance for the Project would be from Green Valley Road with 3 Emergency Vehicle Access roads into the Project, one of which is via Lima Way (EVA-03) which connects to Aberdeen Lane.
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Thank you for the opportunity to provide our feedback.

Best regards,

Inbal Maoz & Stephen Nation

| | |
|---|---|
| **From:** | Ray Rasmussen |
| **To:** | PB-Generations at Green Valley |
| **Cc:** | md.hoffmanmd@gmail.com |
| **Subject:** | Generations at Green Valley Project NOP Comment |
| **Date:** | Wednesday, March 6, 2024 5:06:20 PM |

---

Hello Bianca,

I know the president of our HOA, Martin Hoffman, has sent you a letter with some questions about the proposed project. Please copy me on your answers.

I personally believe that traffic issues will likely be of most concern. With the prior discussions, opening Lima Way to general traffic was a non-starter. That would completely change the nature of our village. Between Silva Valley and Francisco Blvd, Green Valley is already a mess. This would need to be addressed. Adding 214 homes for seniors should make the developers and planners think hard about Green Valley. Going from residential to 55 mph on the current road may not be a good idea.

Look forward to your comments.

Sincerely,

Ray

_____

Ray Rasmussen
rayarasmussen@gmail.com
916-337-4402

3639 Amer Way
Highland View, EDH

10 May 2024

Bianca Dinkler
El Dorado County Planning Services
2850 Fairlane Court
Placerville, CA 95667
*bianca.dinkler@edcgov.us*

**COMMENTS TO REQUEST FOR REVIEW FOR THE GENERATIONS AT GREEN VALLEY (GPA22-0001, 222-0001, TM22-001, DA24-0001) PROJECT SCH#2024040463, EL DORADO COUNTY**

Pursuant to the County of El Dorado's request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Notice of Preparation for the Draft Environmental Impact Report* for the Generations at Green Valley (GPA22-0001, 222-0001, TN22-0001, DA24-0001) Project, located in El Dorado County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

## I. Regulatory Setting

### Basin Plan

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has

adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law (OAL) and in some cases, the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues. For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website:
http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/

**Antidegradation Considerations**

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Implementation Policy is available on page 74 at:
https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201805.pdf

In part it states:

*Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.*

*This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.*

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

## II. Permitting Requirements

**Construction Storm Water General Permit**

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit), Construction General Permit Order No. 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention

Plan (SWPPP). For more information on the Construction General Permit, visit the State Water Resources Control Board website at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

**Phase I and II Municipal Separate Storm Sewer System (MS4) Permits**[1]
The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

**Clean Water Act Section 404 Permit**
If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACE). If a Section 404 permit is required by the USACE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements. If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACE at (916) 557-5250.

**Clean Water Act Section 401 Permit – Water Quality Certification**
If an USACE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and

[1] Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications. For more information on the Water Quality Certification, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/water_issues/water_quality_certification/

**Waste Discharge Requirements – Discharges to Waters of the State**

If USACE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation. For more information on the Waste Discharges to Surface Water NPDES Program and WDR processes, visit the Central Valley Water Board website at:https://www.waterboards.ca.gov/centralvalley/water_issues/waste_to_surface_water/

Projects involving excavation or fill activities impacting less than 0.2 acre or 400 linear feet of non-jurisdictional waters of the state and projects involving dredging activities impacting less than 50 cubic yards of non-jurisdictional waters of the state may be eligible for coverage under the State Water Resources Control Board Water Quality Order No. 2004-0004-DWQ (General Order 2004-0004). For more information on the General Order 2004-0004, visit the State Water Resources Control Board website at: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2004/wqo/wqo2004-0004.pdf

**Dewatering Permit**

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Threat General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Threat Waiver) R5-2018-0085. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf

For more information regarding the Low Threat Waiver and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2018-0085.pdf

**Limited Threat General NPDES Permit**

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Limited Threat Discharges to Surface Water* (Limited Threat General Order). A complete Notice of Intent must be submitted to the Central Valley Water Board to obtain coverage under the Limited Threat General Order. For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2016-0076-01.pdf

**NPDES Permit**

If the proposed project discharges waste that could affect the quality of surface waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit. For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/help/permit/

If you have questions regarding these comments, please contact me at (916) 464-4684 or Peter.Minkel2@waterboards.ca.gov.

Peter G. Minkel
Engineering Geologist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

**Sign In Sheet - Generations at Green Valley (GPA22-0001, Z22-0001, TM22-0001, DA24-0001)**
**NOP Public Scoping Meeting Tuesday, March 12th, 2024 5:30pm-7:30pm**
**El Dorado Hills Fire Department, Station 85**
**To Submit Comments, Please Use Comment Card**

| Name: | Address: | Phone/Email: |
|---|---|---|
| Brian C Neil | 2280 Ethel Dr. | 916 804 8080 |
| MIKE LADEAUX | 2565 CLARKSVILLE | 916 934 4992 |
| LARRY Armes | 1880 Green Valley Rd | 916-956-7305 |
| ERIC WALDER | 1870 Green Valley Rd | ericwalder@comcast.net |
| Betty Peterson | 1884 Carl Rd Rescue | bppstuff@gmail.com |
| Ron + Cathy Keil | 1741 Carl Rd Rescue | RON.keil@SBCglobal.net |
| Matt MacKenzie | 2201 Green Valley | 2938207482 |
| Ali & Jeremiah Bailey | 2271 Ethel Dr. Rescue | A.A.BAILEY@ME.com |
| Jeff Kernen - EDHCSD | 1021 Harvard Way | jkernen@edhcsd.org |
| Craig Campbell - | 3094 Aberdeen Ln. | 916 320-8321 |
| RICK BOOK | 2042 E. GREEN SPRINGS RD | 916 606 2659 |
| Deborah M & M.J. Wilson | 3633 Amer Way | 916-941-7429 |
| Eileen Campbell | 3094 Aberdeen Ln | Cmail@directorial.net |
| Jay Janicki | 1901 Green Valley Rd. | jayjan@mac.com |
| Brittney Janicki | " " | brittneykreuzer@gmail.com |
| Aileen Tewksbury | 2030 Marden Dr | aitewks@gmail.com |
| MikeRizzuto | 1960 Green Valley Rd | Mikerizzuto@me.com |
| John Hidahl | Dist 1 Supervisor | John.Hidahl@edcgov.us |
| Cindy Munt | Dist 1 Asst. | cindy.munt@edcgov.us |
| KIRSTEN KLINGHAMMER | 1929 DORMITY RD. RESCUE | KLINGHAM@PACBELL.NET |
| Jeremy Wilson | 2010 E. Green Springs Rd | jwdabomb@hotmail.com |
| BILL & ANN JEPPESEN | 2550 ABERDEEN LN EDH | bill@effective-ppc.com |
| Indy Neuf | | |
| JJ LODER | 2264 COYOTE PASS CT SHANGL | VJ.1@DISCOVERBUILDERS.com |
| DAVE COMSTOCK | 2809 ABERDEEN LN EDH | dandscomstock@comcast.net |
| M. Johnson | 2857 Aberdeen LN | M2times@Pacbell.net |
| Megan Johnson | " | " |
| RAY Stone | 1960 Green Valley RD. | 480.739.8080 Don't Do it! |
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|---|---|
| **From:** | Judith Spaletta |
| **To:** | PB-Generations at Green Valley |
| **Subject:** | generations at Green Valley |
| **Date:** | Monday, March 25, 2024 12:44:55 PM |
| **Attachments:** | green springs ranch.pdf |

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Ms Dinkler:

I delivered to your office my objections to the above on 3/22/2024.
I want to be sure you received it.  I have been ill with pneumonia and thhis has made everything difficult.

Judith Spaletta
2039 Marden Dr
Rescue Ca 95672

Phone 707 489 4342

## Re: Project for Review & Comment - Generations at Green Valley GPA22-0001,TM22-0001,DA24-0001,Z22-0001

Amy A. Phillips <Amy.Phillips@edcgov.us>
Mon 2/26/2024 2:48 PM
To:Bianca L. Dinkler <Bianca.Dinkler@edcgov.us>

Hi Bianca,

The County is subject to the State of California's Phase II MS4 Permit and thus the County's post construction water quality requirements follow those outlined in that Permit in Section E.12. Projects typically qualify as "Small" or "Regulated/Hydromodification" projects under the MS4 Permit / West Slope Development and Redevelopment Standards and Post Construction Stormwater Plan Requirements if improvements (i.e., roads, parking lots, rooftops, driveways, etc.) create or replace 2,500 sf or more of impervious surface (including offsite improvements). Qualifying projects are required to provide treatment of stormwater prior to the water leaving the site or entering a waterbody. Submittal requirements for all projects are provided here.

An Erosion and Sediment Control Plan will need to be included in the plan submittal. Since the project will disturb over one acre of land, the Legally Responsible Person (LRP) is required to obtain Construction General Permit (CGP) coverage through the State Water Resources Control Board (SWRCB). The CGP requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). CGP requirements can be found at the following link: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html

Thank you,

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**From:** Planning Department <planning@edcgov.us>
**Sent:** Thursday, February 22, 2024 12:04 PM
**Subject:** Project for Review & Comment - Generations at Green Valley GPA22-0001,TM22-0001,DA24-0001,Z22-0001

Good Morning,

Please find attached REVISED GPA22-0001,TM22-0001,DA24-0001,Z22-0001 - Generation at Green Valley initial consultation for review and comment.
County Planner: Bianca Dinkler Email: bianca.dinkler@edcgov.us
Phone Number: 530-621-5875

Thank you,

**County of El Dorado**
Planning and Building Department (Planning Services)
2850 Fairlane Court
Placerville, CA 95667
(530) 621-5355

Elevate to El Dorado

A Great Place to Live, Work & Play

# COUNTY OF EL DORADO
# OFFICE of COUNTY SURVEYOR

MEMO

**DATE:** March 5, 2024

**TO:** Bianca Dinkler, Project Planner

**FROM:** Justin Cisneros - Phone (530) 621-5320, Justin.cisneros@edcgov.us

**SUBJECT: GPA22-0001,TM22-0001,DA24-0001,Z22-0001 – GENERATIONS AT GREEN VALLEY (Green Valley Road Benefits, LLC, c/o TTLC Management Inc./Jenny Louie Helm, Wayland H. Louie and Jen Lynn Louie, Successor Trustee of the Fay Louie 2001 Living Trust; Kimberly Dixon, Amanda R., and Robert N. Pena):**

---

We have looked over the application and have the following comments.

1) Upon project approval from the Planning Department. A Final Map Package will need to be submitted with the County Surveyor's Office.

2) All survey monuments must be set prior to the filing the Final Map or the developer shall have surety of work to be done by bond or cash deposit. Verification of set survey monuments and the amount of the bond or deposit to be coordinated with the County Surveyors Office prior to the filing of the Final Map.

3) The roads serving the development shall be named by filing a completed Road Name Petition, with the County Surveyor's Office. Proof of any signage required by the Surveyor's Office must be provided prior to filing the Final Map.

4) Situs addressing for the project shall be coordinated with the County Surveyor's Office prior to filing the Final Map.

5) Prior to filing the Final Map, a letter will be required from all agencies that have placed conditions on the map. The letter will state that **"all conditions placed on TMXX-XXX by (that agency) have been satisfied."** The applicant is responsible for providing these letters to the Surveyor's Office.

6) All boundary monuments disturbed during project construction shall be reset by a Professional Land Surveyor or Qualified Engineer as defined by Section 8771 of the California Business and Professions Code (Land Surveyors Act).

# SCOPING COMMENT CARD

**EL DORADO COUNTY PLANNING AND BUILDING DEPARTMENT**
**GENERATIONS AT GREEN VALLEY (GPA22-0001, Z22-0001, TM22-0001, DA24-0001)**
**EL DORADO HILLS FIRE STATION 85, 1050 WILSON BOULEVARD, EL DORADO HILLS, CA**
**MARCH 12TH, 2024**

IF YOU WOULD LIKE TO SUBMIT A WRITTEN STATEMENT REGARDING THE SCOPE AND CONTENT OF THE DRAFT EIR, PLEASE COMPLETE THE FOLLOWING INFORMATION AND COMMENT IN THE SPACE PROVIDED BELOW AND DROP IN THE WRITTEN COMMENT BOX. COMMENTS MAY ALSO BE SUBMITTED BY MAIL TO: EL DORADO COUNTY PLANNING AND BUILDING DEPARTMENT, PLANNING DIVISION, 2850 FAIRLANE COURT, PLACERVILLE, CA 95667, OR EMAIL: GENERATIONSATGREENVALLEY@EDCGOV.US

SCOPING COMMENTS MUST ARRIVE BY 5:00PM MARCH 26TH, 2024. PLEASE INCLUDE PROJECT NAME IN SUBJECT LINE: GENERATIONS AT GREEN VALLEY.

Name: Jeremy Wilson Organization: Local Resident

Address: 2010 E. Green Springs Rd

Comment: (1) E. Green Springs Rd is part of Green Springs Ranch. This is a privately owned community and our roads are privately owned. You may not legally dig + run water lines on my road or in Green Springs Ranch.

(2) Traffic on Green Valley Rd is already terrible. Accidents occur regularly. ~400 additional homes will only make the bad traffic situation worse.

No high density housing!

# SCOPING COMMENT CARD

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SCOPING COMMENTS MUST ARRIVE BY 5:00PM MARCH 26TH, 2024. PLEASE INCLUDE PROJECT NAME IN SUBJECT LINE: GENERATIONS AT GREEN VALLEY.

Name: MICHAEL WILSON Organization: HOME OWNER

Address: 3633 AMER WAY EL DORADO HILLS

Comment: I AM CONCERNED ON TRAFFIC ON GREEN Valley RD . . . ?
HOW DOES THE COUNTY CHANGE THE DENSITY SO SIGNIFICANTLY .
IMPACT ON WATER FOR THE AREA
WHAT IMPACT ON SCHOOLS, FIRE, POLICE, NOICE.
WHY IS THE COUNTY NOT DOING THE STUDY.
IMPACT ON WILDLIFE.

# SCOPING COMMENT CARD

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SCOPING COMMENTS MUST ARRIVE BY 5:00PM MARCH 26TH, 2024. PLEASE INCLUDE PROJECT NAME IN SUBJECT LINE: GENERATIONS AT GREEN VALLEY.

Name: Deborah Wilson Organization: Homeowner Highland View

Address: 3633 Amer Way EDH

Comment: major concerns that need to be studied:

★ TRAFFIC - Already impacted on Green Valley Rd. Access through Highland View would be disastrous for homeowners

★ WATER - impact on water supply both quantity & quality

FIRE - access through Highland View looks like it would be difficult - are more fire fighting equipment & staff to be added to help.

★ Wildlife - displacement and encroachment on homeowners

★ Construction will potentially have extreme negative impacts on homeowners air quality, wildlife and traffic

★ Security & Police - we already have little coverage - will it be impacted or Staffing increased

- ☆ Access to proposed recreation area looks difficult
- ☆ Exit Streets on Green Valley are very close together and close to Mason Division - will this cause more traffic problems than 1 major exit onto Green Valley if the project is approved.
- ☆ Wild fire - will it put adjoining properties adversely - Resources
- ☆ Utilities - especially the impact on potentially increased outages for electric, water, internet & gas.
- ☆ Destruction of natural trees/grasses etc. Effects wildlife as well as air quality.
- ☆ Recreation - planned park/ball park - impact on increased traffic. Where will they park/what is the additional impact.

# SCOPING COMMENT CARD

**EL DORADO COUNTY PLANNING AND BUILDING DEPARTMENT**
**GENERATIONS AT GREEN VALLEY (GPA22-0001, Z22-0001, TM22-0001, DA24-0001)**
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Address: 3633 AMER WAY EL DORADO HILLS

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IMPACT ON WATER FOR THE AREA
WHAT IMPACT ON SCHOOLS, FIRE, POLICE, NOICE.
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IMPACT ON WILDLIFE.

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- ☆ Destruction of natural trees/grasses etc. Effects wildlife as well as air quality.
- ☆ Recreation - planned park/ball park - impact on increased traffic. Where will they park/what is the additional impact.

# Appendix B

Air Quality, Energy, and
Greenhouse Gas Modeling Data

# Memo

455 Capitol Mall, Suite 300
Sacramento, CA 95814
916.444.7301

**Date:** May 15, 2024

**To:** Aidan Barry, Green Valley Road Benefits, LLC

**From:** Matthew McFalls & Peter Hoholick, Ascent, Inc.

**Subject:** Construction Health Risk Assessment for the Generations at Green Valley Project

# 1 INTRODUCTION

This health risk assessment (HRA) evaluates the potential health risks associated with construction of the proposed Generations at Green Valley Project (project) at Assessor's Parcel Numbers (APNs) 126-020-001, 126-020-002, 126-020-003, 126-020-004, and 126-150-023 in an unincorporated area of El Dorado County. The focus of this HRA is to evaluate the exposure of nearby residential and school receptors to construction related primarily diesel particulate matter (diesel PM) from diesel-powered equipment and vehicles used during construction and the hauling of materials and emissions of particulate matter ($PM_{10}$). This assessment was conducted in accordance with the Sacramento Metropolitan Air Quality Management District's (SMAQMD's) California Environmental Quality Act (CEQA) guide for *Dispersion Modeling of Construction-Generated PM10 Emissions* (SMAQMD 2013).

This HRA consists of three parts: a toxic air contaminant (TAC) inventory, air dispersion modeling, and risk calculations. This report discusses these three parts, thresholds of significance used, and the results of the HRA.

# 2 INVENTORY OF TOXIC AIR CONTAMINANT EMISSIONS

Construction activities for the Project would include grading and building construction. Construction-related emissions of diesel PM were determined by conducting detailed construction emissions modeling for the project using SMAQMD-recommended California Emissions Estimator Model (CalEEMod), version 2022.1.1.21. CalEEMod default values for equipment parameters (e.g., engine horsepower, number, type per phase) were used. Diesel PM emissions included in the HRA are based on the total $PM_{10}$ exhaust emissions generated within and near the project boundary.

Construction is anticipated to begin in April 2025 and be completed in five years. Construction is assumed to occur 12 hours/day (7 a.m. to 7 p.m.), Monday through Friday.

This HRA includes an evaluation of diesel PM emissions from diesel-powered heavy-duty construction equipment used within the project site, and from diesel trucks used to move materials in and out of the project area. Heavy-duty construction equipment use would occur in areas where grading and new construction would occur within the project boundary. The location of the heavy-duty equipment was based on the locations of each construction phase. Diesel PM emissions generated by heavy duty trucks were modeled along one haul route starting at U.S. Route 50 (US-50), continuing on Bass Lake Road to Silver Springs Parkway and then onto Green Valley Road, and terminating at the project site. This approach is conservative because it assumes all traffic, and associated emissions, going to and from the site would occur on a single route. If actual traffic is split among other roads, resultant emissions would be lower than modeled.

Emissions estimates from construction equipment and truck trips are shown in Attachment A.

# 3 AIR DISPERSION MODELING

## 3.1 APPROACH

To determine health risk and pollutant concentrations at specific locations (i.e., receptors), first, air dispersion modeling was conducted using site-specific parameters (e.g., terrain, meteorological data), and then risk calculations were conducted. Dispersion modeling was conducted using CARB's approved American Meteorological Society/Environmental Protection Agency Regulatory Model Improvement Committee modeling system (AERMOD) Version 12.0.0, with a unit emission rate of 1 gram per second (g/s) for all modeled sources. This approach is used so that resulting ground-level concentrations can be multiplied by actual emission rates for various scenarios (e.g., default model runs, reduced emissions scenario) without running AERMOD multiple times.

Then, using the ground-level concentrations from the AERMOD run at each receptor location in combination with emission estimates for $PM_{10}$, cancer risk and PM concentration calculations were conducted using cancer potency factors consistent with OEHHA guidance. The air dispersion model included all standard regulatory default options, including the use of rural dispersion parameters and local terrain. Terrain in the project vicinity is generally hilly.

Land uses in the surrounding areas include open wooded areas and neighborhoods west and south of the project site, which results in rural flow patterns that are likely influenced by trees and hills and less pavement and built-up environments. The rural dispersion modeling parameters account for such patterns. The urban heat island effect, which results from surface heating of paved and built-up environment, is likely not prevalent in the project area. AERMOD allows the user to model urban heat island impacts by selecting urban or rural land use option. The project site fits the definition of a rural area; thus, the rural dispersion coefficient option was used in AERMOD to estimate air pollutant concentrations.

The base project and the project with an alternative wastewater pipeline where the proposed new force main would be extended further south along Silva Valley Parkway where it would connect to a 24-inch gravity flow pipeline south of Harvard Way were both analyzed.

## 3.2 AERMOD MODEL CONFIGURATION

The following input parameters were used in the model run:

- Projected Coordinate System: Universal Transverse Mercator (UTM) zone 10;
- Geographic Datum: World Geodetic System (WGS) of 1984;
- Rural land use based on AERMOD's Land Use Procedure based on the level of development within a 1-kilometer (km) radius of the Project site;
- Period (i.e., annual) averaging of concentrations for construction activity;
- Unit emission rate of 1 g/s for all sources; and
- U.S. Geologic Survey North American Datum NAD 75 7.5-minute terrain data

## 3.3 INPUTS AND ASSUMPTIONS

### Meteorological Data

Pre-processed meteorological data from 2014-2018 collected at the Sacramento Executive Airport station was obtained from SMAQMD. The model was set to run all five years (i.e., 2014-2018) of the data. The Sacramento Executive Airport station is the nearest station to the Project site with pre-processed meteorological data, located along Freeport Boulevard, approximately 27 miles southeast of the Project site and the most representative meteorological station for the site. This station was chosen because it has similar elevation, and surrounding land uses as the project site. The wind at the Sacramento Executive Airport primarily blows from the south-southwest.

### Receptor Grid

A receptor grid was placed around the project site, encompassing receptors within 300 meters of the project site with 25 meter (m) spacing for the first 100 meters and 100 meter spacing after that. Discrete receptors were removed from all locations with no sensitive receptors, such as the Project site, roadways, and the middle of pastures. All receptors were given a flagpole receptor height of 1.8 meters per SMAQMD guidance (2013).

### Source Type and Dimensions

For the project site where construction activities would occur, construction emission sources (i.e., the use of heavy-duty equipment on site) were modeled as adjacent volume sources. Diesel PM emissions from construction equipment operating within the project area was modeled as adjacent volume sources to represent diesel PM exhaust with sides of 30 meters, initial lateral dimensions of 6.98 meters, and initial vertical dimensions of 1 meter, and a release height of 5 meters, consistent with SMAQMD guidance (SMAQMD 2013).

Haul routes were modeled using adjacent line volume sources along the paths of travel. The truck line volumes were modeled assuming a release height of 3.4 meters, representing exhaust release from a typical truck. Additionally, the plume width was 8.6 meters and plume height was 5.78 meters. The length of haul route in AERMOD was approximately 8,711 meters (5.41 miles) and extended from the Project site, south along Green Valley Road to Silver Springs Parkway to Bass Lake to Highway 50. Source parameters used in AERMOD are shown in Attachment A.

# 4 HEALTH RISK CALCULATIONS

## 4.1 CANCER AND NON-CANCER RISK

To analyze impacts to sensitive receptors, the resulting pollutant concentrations from the AERMOD dispersion analysis were multiplied by the emission rates to obtain risk estimates. Total annual tons of diesel PM emissions resulting from project construction were converted to grams per second, based on the anticipated duration of each construction phases and a Monday through Friday work week with 12-hour workdays. Project emission rates for each diesel PM source (i.e., onsite equipment use, offsite hauling) were multiplied by the unitized AERMOD outputs for their respective source type to obtain scaled concentrations of diesel PM. Risk calculations were conducted using the following parameters, consistent with OEEHA guidance, shown in Table 1. All risk calculations are included in Attachment A.

**Table 1 Risk Parameters for Cancer and Non-Cancer Health Risk Assessment**

| Risk Parameters | Residential Receptors | School Receptors |
|---|---|---|
| Analysis Type | Cancer Risk and Chronic Risk (Non cancer) | Cancer Risk and Chronic Risk (Non cancer) |
| Receptor Type | Residential | School |
| Exposure Duration | 6 years (April 2025-March 2030)<br>0.25 years in 3rd Tri, 2 years in 0<2, and 3.75 in 2<16 | 6 years (April 2025-March 2030) |
| Averaging Time | 70 years | 70 years |
| FAH [a] | 1.0 for all age bins | N/A |
| Breathing Rates [b] | 361 in 3rd Tri, 1090 in 0<2, and 572 in 2<16 | 640 |

[a] Since a residence is within the 1 in a million isopleth, FAH is conservatively set to 1.0.

[b] Based on Point Estimates of Residential Daily Breathing Rates, Table 5.6, OEHHA 2015, 95th percentile for 3rd trimester and 0<2 bins; 80th percentile thereafter (for residences only)

Notes: FAH = fraction of time at home

Source: Prepared by Ascent in 2023.

# 5 HEALTH RISK CEQA THRESHOLDS OF SIGNIFICANCE

The El Dorado Air Quality Management District (EDAQMD) does not have guidance for HRAs, so SMAQMD's guidance was used for this analysis. According to SMAQMD, a Project's impact on health risks would be considered significant under the CEQA if the Project-related increase in risks would exceed the following thresholds shown in Table 2. Results of this HRA are compared to the SMAQMD-adopted thresholds of significance.

**Table 2 Significant Health Risk Levels**

| Project-Level | Significance Risk Threshold |
|---|---|
| Individual Project:<br>Construction and/or operations | Compliance with a qualified community risk reduction plan, or<br>▶ Increased cancer risk of > 10 chances in one million[1]<br>▶ Increased noncancer risk of > 1.0 Hazard index |

[1] Maximum Incremental Cancer Risk is the maximum lifetime excess cancer risk estimate (per million) at residential or worker receptor (whichever is greater). The maximum estimated risk generally is possible at only one location. All other locations show lower risks.

Source: OEHHA 2015.

# 6 RESULTS

Results of the modeling are discussed below and presented graphically in Figure 1 and Figure 2 for the unmitigated and mitigated analyses, respectfully.

## 6.1 UNMITIGATED CONSTRUCTION EMISSIONS

Based on the CalEEMod modeling, air dispersion modeling, and risk calculations discussed above, Project-generated diesel PM emissions are estimated to result in a maximally exposed individual resident (MEIR) for cancer risk of 27.0 chances in one million, as shown in Figure 1. Considering SMAQMD threshold of significance of 10 chances in one million for cancer risk, the MEIR exceeds the applicable threshold of 10 chances in one million for cancer risk. This would make the cancer risk impact of construction significant. Mitigation would be required to reduce the impact.

Alternative Pipeline Scenario

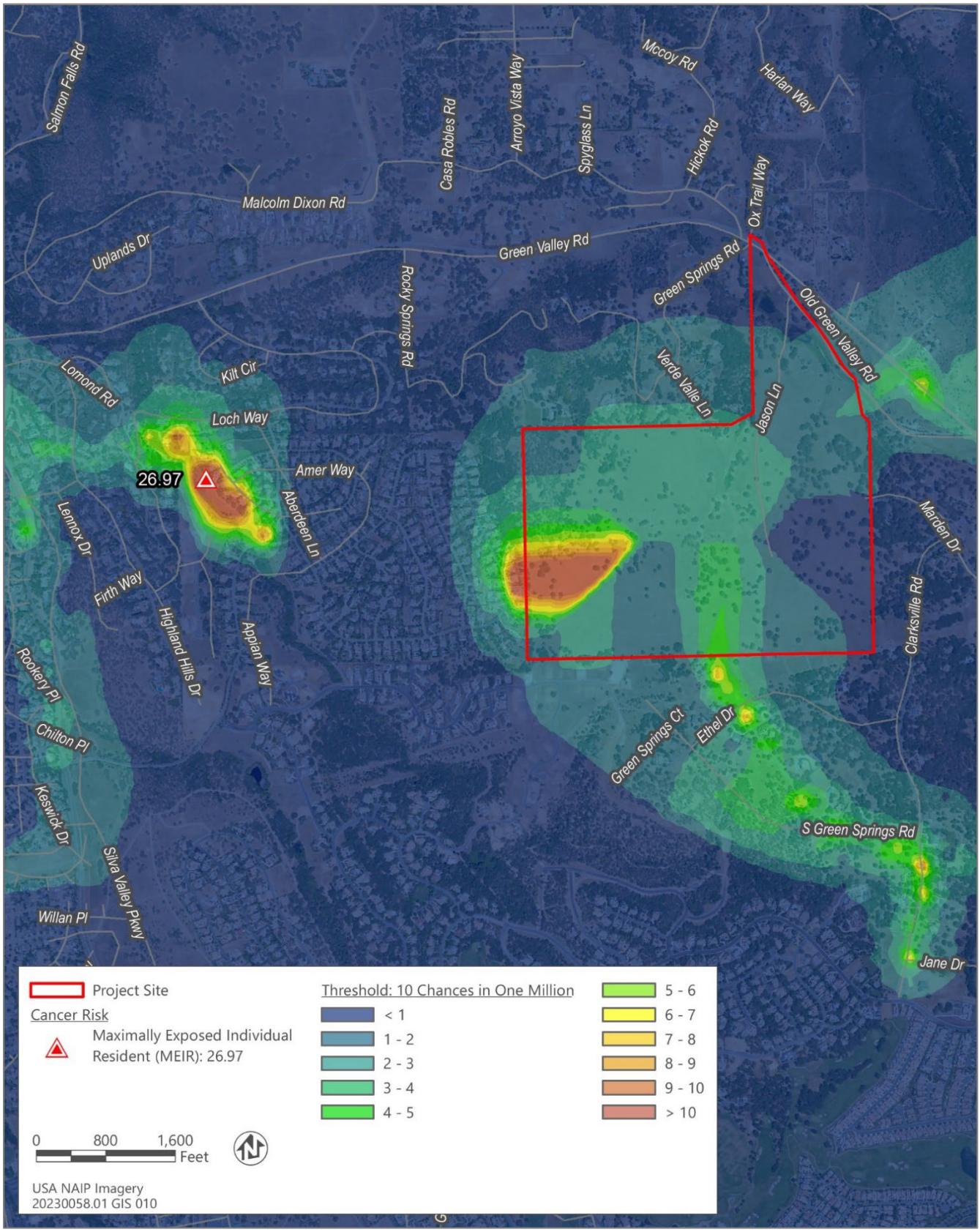
Based on the CalEEMod modeling, air dispersion modeling, and risk calculations discussed above, Project-generated (with the alternative pipeline) diesel PM emissions are estimated to result in a maximally exposed individual resident (MEIR) for cancer risk of 27.0 chances in one million, as shown in Figure 2. Considering SMAQMD threshold of significance of 10 chances in one million for cancer risk, the MEIR exceeds the applicable threshold of 10 chances in one million for cancer risk. This would make the cancer risk impact of construction significant. Mitigation would be required to reduce the impact.

## 6.2 MITIGATED CONSTRUCTION EMISSIONS

To mitigate this impact, all construction equipment greater than 25 horsepower would be required to use Tier 4 (Final) engines. Implementation of Tier 4 equipment on-site would reduce the diesel PM construction emissions from 280 pounds to 60 pounds relative to the unmitigated scenario. As a result, project-generated diesel PM emissions would be reduced and result in MEIR for cancer risk of 3.5 chances in one million and would not exceed the applicable threshold of 10 chances in one million for cancer risk, as shown in Figure 3. Considering that the MEIR represents the greatest risk value modeled, the thresholds would not be exceeded at any nearby offsite receptor.

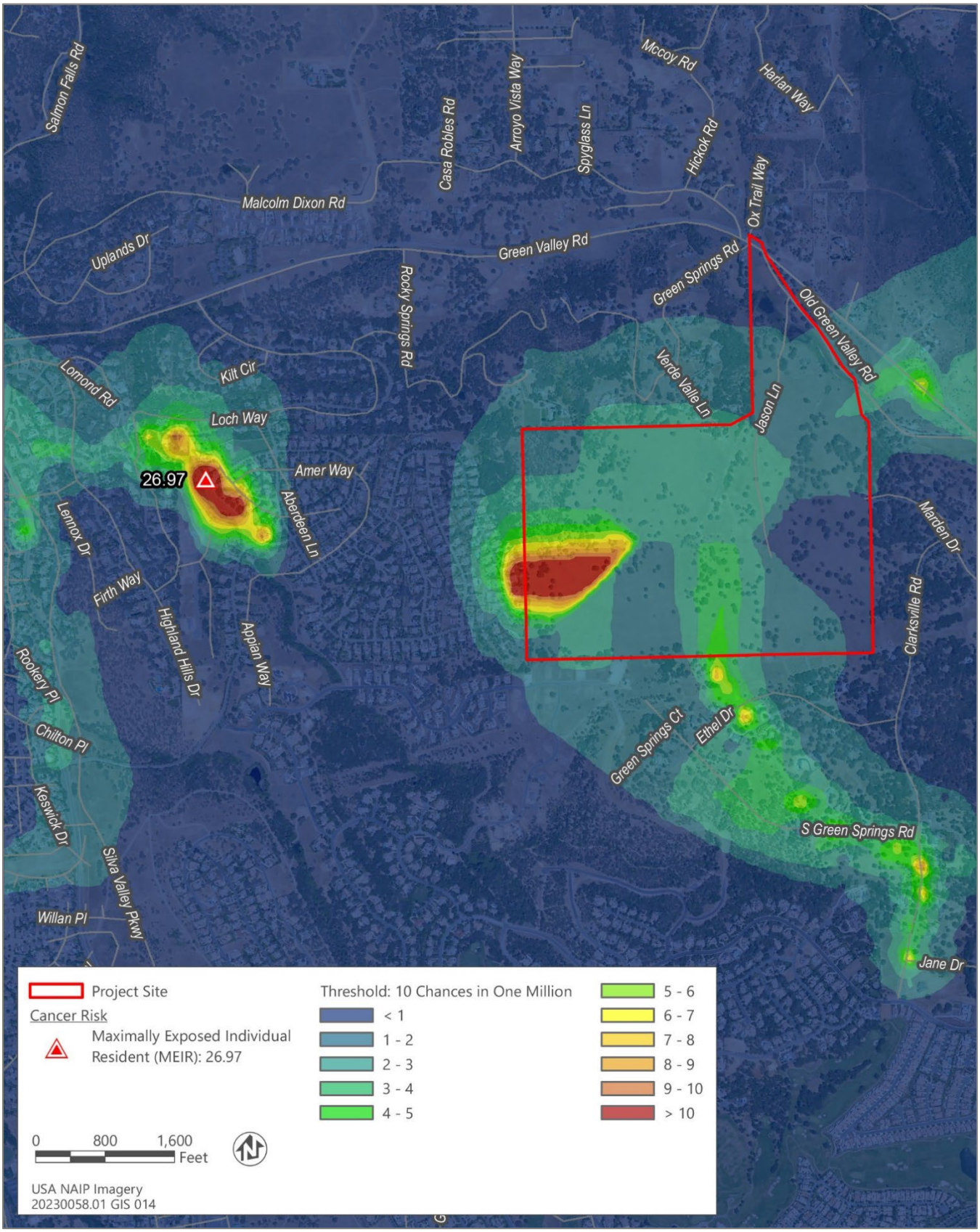
Alternative Pipeline Scenario

Implementation of Tier 4 equipment on-site would reduce the diesel PM construction emissions from 280 pounds to 60 pounds relative to the unmitigated scenario with the alternative pipeline. As a result, project-generated diesel PM emissions would be reduced and result in MEIR for cancer risk of 3.5 chances in one million and would not exceed the applicable threshold of 10 chances in one million for cancer risk, as shown in Figure 4. Considering that the MEIR represents the greatest risk value modeled, the thresholds would not be exceeded at any nearby offsite receptor.




Source: adapted by Ascent in 2024.

Figure 1 Unmitigated Cancer Risk Threshold: 10 Chances in One Million




Source: adapted by Ascent in 2024.

Figure 2 Alternate Wastewater Pipeline Unmitigated Cancer Risk Threshold: 10 Chances in One Million




Source: adapted by Ascent in 2024.

Figure 3 Mitigated Cancer Risk Threshold: 10 Chances in One Million




Source: adapted by Ascent in 2024.

Figure 4 Alternate Wastewater Pipeline Mitigated Cancer Risk Threshold: 10 Chances in One Million

# Conclusion

Before mitigation, construction of the project would expose nearby receptors to significant cancer risk, over the 10 chances in one million threshold. With mitigating all onsite construction equipment to tier 4 engines, construction-generated TACs would not expose nearby receptors to significant cancer risk (i.e., greater than 10 chances in one million. Construction-related exposure from TACs would be **less than significant** after mitigation to require all construction equipment above 25 horsepower to use Tier 4 (Final) engines.

# 7 REFERENCES

California Air Pollution Control Officers Association. 2023. California Emissions Estimator Model (CalEEMod), Version 2022.1.1.16. Available: http://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/01_user-39-sguide2020-4-0.pdf?sfvrsn=6.

Office of Environmental Health Hazard Assessment. 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. Available: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf. Accessed August 2023.

Sacramento Metro Air Quality Management District. 2013 (May). *Dispersion Modeling of Construction-Generated $PM_{10}$ Emissions*. Available: https://www.airquality.org/LandUseTransportation/Documents/Ch3PMDispersionModelingGuidanceFINAL7-2013.pdf. Accessed August 2023.

1. Basic Project Information

1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | Green Valley |
| Construction Start Date | 4/1/2025 |
| Lead Agency | |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 2.3 |
| Precipitation (days) | 10.4 |
| Location | 38.70432290409059, -121.04617842490336 |
| County | El Dorado-Mountain County |
| City | Unincorporated |
| Air District | El Dorado County AQMD |
| Air Basin | Mountain Counties |
| TAZ | 400 |
| EDFZ | 4 |
| Electric Utility | Pacific Gas & Electric Company |
| Gas Utility | Pacific Gas & Electric |
| App Version | 2022.1.1.21 |

1.2. Land Use Types

| Land Use Subtype | Size | Unit | Lot Acreage | Building Area (sq ft) | Landscape Area (sq ft) | Special Landscape Area (sq ft) | Population | Description |
|---|---|---|---|---|---|---|---|---|
| Single Family Housing | 18 | Dwelling Unit | 5 | 35100 | 210831 | | 46 | Low Density Residential |
| Single Family Housing | 361 | Dwelling Unit | 171 | 703950 | 4228341 | | 917 | High Density Residential |
| Health Club | 144 | 1000sqft | 3.3 | 143748 | | | | Clubhouse |
| City Park | 4 | Acre | 4 | 0 | | | | Public Facilities (Lot A) |
| City Park | 57.6 | Acre | 57.6 | 0 | | | | Open Space |
| City Park | 8 | Acre | 8 | 0 | | | | Landscape Lots L1-L13, Open Spaces C-K |
| Road Construction | 3 | Mile | 31.5 | 0 | 0 | | | road construction |
| Road Construction | 7.3 | Mile | 34.2 | 0 | 0 | | | Offsite improvements |

1.3. User-Selected Emission Reduction Measures by Emissions Sector

| Sector | # | Measure Title |
|---|---|---|
| Construction | C-5 | Use Advanced Engine Tiers |

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

| Un/Mit. | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Unmit. | | 12 | 10.2 | 86.7 | 97 | 0.18 | 3.78 | 147 | 147 | 3.48 | 15 | 15.8 | 21113 | 21113 | 0.86 | 0.41 | 12.3 | 21206 |
| Mit. | | 2.84 | 2.7 | 17.3 | 119 | 0.18 | 0.47 | 147 | 147 | 0.46 | 15 | 15.1 | 21113 | 21113 | 0.86 | 0.41 | 12.3 | 21206 |
| % Reduced | | 76.4 | 73.4 | 80.1 | −22.3 | | 87.7 | | 0.21 | 86.9 | | 4.86 | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Unmit. | | 6.42 | 129 | 45.6 | 55.1 | 0.09 | 1.91 | 147 | 147 | 1.76 | 15 | 15.4 | 10900 | 10900 | 0.43 | 0.41 | 0.35 | 10947 |
| Mit. | | 1.49 | 129 | 10 | 63.2 | 0.09 | 0.18 | 147 | 147 | 0.18 | 15 | 15.1 | 10900 | 10900 | 0.43 | 0.41 | 0.35 | 10947 |
| % Reduced | | 76.7 | 0.06 | 77.9 | −14.7 | | 90.4 | | 0.24 | 89.6 | | 2.11 | | | | | | |
| Average Daily (Max) | | | | | | | | | | | | | | | | | | |
| Unmit. | | 3.62 | 22.2 | 25.8 | 29.7 | 0.05 | 1.07 | 102 | 102 | 0.99 | 10.4 | 10.7 | 6571 | 6571 | 0.24 | 0.29 | 3.78 | 6615 |
| Mit. | | 0.96 | 22.2 | 5.55 | 35 | 0.05 | 0.12 | 102 | 102 | 0.12 | 10.4 | 10.5 | 6571 | 6571 | 0.24 | 0.29 | 3.78 | 6615 |
| % Reduced | | 73.5 | 0.06 | 78.5 | −17.6 | | 88.4 | | 0.16 | 87.6 | | 1.59 | | | | | | |
| Annual (Max) | | | | | | | | | | | | | | | | | | |
| Unmit. | | 0.66 | 4.05 | 4.71 | 5.43 | 0.01 | 0.2 | 18.6 | 18.7 | 0.18 | 1.9 | 1.94 | 1088 | 1088 | 0.04 | 0.05 | 0.63 | 1095 |
| Mit. | | 0.17 | 4.05 | 1.01 | 6.38 | 0.01 | 0.02 | 18.6 | 18.6 | 0.02 | 1.9 | 1.91 | 1088 | 1088 | 0.04 | 0.05 | 0.63 | 1095 |
| % Reduced | | 73.5 | 0.06 | 78.5 | −17.6 | | 88.4 | | 0.16 | 87.6 | | 1.59 | | | | | | |

2.2. Construction Emissions by Year, Unmitigated

| Year | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily - Summer (Max) | | | | | | | | | | | | | | | | | | |
| 2025 | | 12 | 10.2 | 86.7 | 97 | 0.18 | 3.78 | 90 | 93.8 | 3.48 | 12.3 | 15.8 | 21113 | 21113 | 0.86 | 0.22 | 5.79 | 21206 |
| 2026 | | 2.32 | 2.03 | 13.3 | 25.1 | 0.04 | 0.39 | 147 | 147 | 0.36 | 15 | 15.3 | 6551 | 6551 | 0.13 | 0.41 | 12.3 | 6688 |
| 2027 | | 2.23 | 1.94 | 12.7 | 24.3 | 0.04 | 0.35 | 147 | 147 | 0.32 | 15 | 15.3 | 6478 | 6478 | 0.13 | 0.39 | 11.2 | 6608 |
| 2028 | | 2.09 | 1.86 | 12 | 23.6 | 0.04 | 0.31 | 147 | 147 | 0.29 | 15 | 15.3 | 6391 | 6391 | 0.13 | 0.39 | 10.1 | 6520 |
| 2029 | | 2.03 | 3.12 | 11.4 | 22.9 | 0.04 | 0.29 | 147 | 147 | 0.27 | 15 | 15.2 | 6301 | 6301 | 0.13 | 0.38 | 9.09 | 6426 |
| Daily - Winter (Max) | | | | | | | | | | | | | | | | | | |
| 2025 | | 6.42 | 5.42 | 45.6 | 55.1 | 0.09 | 1.91 | 147 | 147 | 1.76 | 15 | 15.4 | 10900 | 10900 | 0.43 | 0.41 | 0.35 | 10947 |
| 2026 | | 2.24 | 1.94 | 13.7 | 22.6 | 0.04 | 0.39 | 147 | 147 | 0.36 | 15 | 15.3 | 6335 | 6335 | 0.15 | 0.41 | 0.32 | 6460 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2027 | 2.1 | 1.85 | 13 | 22 | 0.04 | 0.35 | 147 | 147 | 0.32 | 15 | 15.3 | 6265 | 6265 | 0.15 | 0.39 | 0.29 | 6387 |
| 2028 | 2.02 | 1.73 | 12.3 | 21.4 | 0.04 | 0.31 | 147 | 147 | 0.29 | 15 | 15.3 | 6183 | 6183 | 0.14 | 0.39 | 0.26 | 6304 |
| 2029 | 1.96 | 129 | 11.7 | 20.8 | 0.04 | 0.29 | 147 | 147 | 0.27 | 15 | 15.2 | 6097 | 6097 | 0.14 | 0.38 | 0.24 | 6214 |
| 2030 | 0.26 | 129 | 0.89 | 2.51 | < 0.005 | 0.01 | 24.4 | 24.4 | 0.01 | 2.49 | 2.5 | 497 | 497 | 0.01 | 0.02 | 0.03 | 503 |
| Average Daily | | | | | | | | | | | | | | | | | |
| 2025 | 3.62 | 3.06 | 25.8 | 29.7 | 0.05 | 1.07 | 49.1 | 50.2 | 0.99 | 5.65 | 6.64 | 6571 | 6571 | 0.24 | 0.12 | 1.66 | 6615 |
| 2026 | 1.6 | 1.39 | 9.7 | 16.2 | 0.03 | 0.28 | 102 | 102 | 0.26 | 10.4 | 10.7 | 4555 | 4555 | 0.1 | 0.29 | 3.78 | 4648 |
| 2027 | 1.5 | 1.33 | 9.19 | 15.8 | 0.03 | 0.25 | 102 | 102 | 0.23 | 10.4 | 10.6 | 4505 | 4505 | 0.1 | 0.28 | 3.44 | 4595 |
| 2028 | 1.45 | 1.28 | 8.71 | 15.5 | 0.03 | 0.22 | 102 | 102 | 0.21 | 10.4 | 10.6 | 4457 | 4457 | 0.1 | 0.28 | 3.13 | 4547 |
| 2029 | 1.15 | 4.47 | 7.08 | 12.5 | 0.02 | 0.19 | 72.9 | 73.1 | 0.18 | 7.45 | 7.62 | 3377 | 3377 | 0.08 | 0.19 | 1.99 | 3437 |
| 2030 | 0.05 | 22.2 | 0.15 | 0.44 | < 0.005 | < 0.005 | 4.09 | 4.09 | < 0.005 | 0.42 | 0.42 | 87 | 87 | < 0.005 | < 0.005 | 0.08 | 88 |
| Annual | | | | | | | | | | | | | | | | | |
| 2025 | 0.66 | 0.56 | 4.71 | 5.43 | 0.01 | 0.2 | 8.97 | 9.16 | 0.18 | 1.03 | 1.21 | 1088 | 1088 | 0.04 | 0.02 | 0.28 | 1095 |
| 2026 | 0.29 | 0.25 | 1.77 | 2.96 | < 0.005 | 0.05 | 18.6 | 18.6 | 0.05 | 1.9 | 1.94 | 754 | 754 | 0.02 | 0.05 | 0.63 | 769 |
| 2027 | 0.27 | 0.24 | 1.68 | 2.88 | < 0.005 | 0.05 | 18.6 | 18.6 | 0.04 | 1.9 | 1.94 | 746 | 746 | 0.02 | 0.05 | 0.57 | 761 |
| 2028 | 0.26 | 0.23 | 1.59 | 2.82 | < 0.005 | 0.04 | 18.6 | 18.7 | 0.04 | 1.9 | 1.94 | 738 | 738 | 0.02 | 0.05 | 0.52 | 753 |
| 2029 | 0.21 | 0.82 | 1.29 | 2.28 | < 0.005 | 0.03 | 13.3 | 13.3 | 0.03 | 1.36 | 1.39 | 559 | 559 | 0.01 | 0.03 | 0.33 | 569 |
| 2030 | 0.01 | 4.05 | 0.03 | 0.08 | < 0.005 | < 0.005 | 0.75 | 0.75 | < 0.005 | 0.08 | 0.08 | 14.4 | 14.4 | < 0.005 | < 0.005 | 0.01 | 14.6 |

2.3. Construction Emissions by Year, Mitigated

| Year | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily - Summer (Max) | | | | | | | | | | | | | | | | | | |
| 2025 | | 2.84 | 2.7 | 17.3 | 119 | 0.18 | 0.47 | 90 | 90.3 | 0.46 | 12.3 | 12.7 | 21113 | 21113 | 0.86 | 0.22 | 5.79 | 21206 |
| 2026 | | 1.39 | 1.28 | 6.27 | 26.9 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15 | 15.1 | 6551 | 6551 | 0.13 | 0.41 | 12.3 | 6688 |
| 2027 | | 1.35 | 1.24 | 6.1 | 26.2 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15 | 15.1 | 6478 | 6478 | 0.13 | 0.39 | 11.2 | 6608 |
| 2028 | | 1.25 | 1.2 | 5.87 | 25.5 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15 | 15.1 | 6391 | 6391 | 0.13 | 0.39 | 10.1 | 6520 |
| 2029 | | 1.22 | 2.61 | 5.64 | 24.9 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15 | 15.1 | 6301 | 6301 | 0.13 | 0.38 | 9.09 | 6426 |
| Daily - Winter (Max) | | | | | | | | | | | | | | | | | | |
| 2025 | | 1.49 | 1.45 | 10 | 63.2 | 0.09 | 0.18 | 147 | 147 | 0.18 | 15 | 15.1 | 10900 | 10900 | 0.43 | 0.41 | 0.35 | 10947 |
| 2026 | | 1.31 | 1.2 | 6.66 | 24.4 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15 | 15.1 | 6335 | 6335 | 0.15 | 0.41 | 0.32 | 6460 |
| 2027 | | 1.22 | 1.15 | 6.41 | 23.8 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15 | 15.1 | 6265 | 6265 | 0.15 | 0.39 | 0.29 | 6387 |
| 2028 | | 1.18 | 1.06 | 6.17 | 23.3 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15 | 15.1 | 6183 | 6183 | 0.14 | 0.39 | 0.26 | 6304 |
| 2029 | | 1.16 | 129 | 5.93 | 22.8 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15 | 15.1 | 6097 | 6097 | 0.14 | 0.38 | 0.24 | 6214 |
| 2030 | | 0.16 | 129 | 0.75 | 2.36 | < 0.005 | < 0.005 | 24.4 | 24.4 | < 0.005 | 2.49 | 2.49 | 497 | 497 | 0.01 | 0.02 | 0.03 | 503 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| 2025 | | 0.96 | 0.91 | 5.55 | 35 | 0.05 | 0.12 | 49.1 | 49.3 | 0.12 | 5.65 | 5.77 | 6571 | 6571 | 0.24 | 0.12 | 1.66 | 6615 |
| 2026 | | 0.94 | 0.86 | 4.67 | 17.6 | 0.03 | 0.06 | 102 | 102 | 0.06 | 10.4 | 10.5 | 4555 | 4555 | 0.1 | 0.29 | 3.78 | 4648 |
| 2027 | | 0.87 | 0.83 | 4.5 | 17.1 | 0.03 | 0.06 | 102 | 102 | 0.06 | 10.4 | 10.5 | 4505 | 4505 | 0.1 | 0.28 | 3.44 | 4595 |
| 2028 | | 0.85 | 0.81 | 4.34 | 16.8 | 0.03 | 0.06 | 102 | 102 | 0.06 | 10.4 | 10.5 | 4457 | 4457 | 0.1 | 0.28 | 3.13 | 4547 |
| 2029 | | 0.62 | 4.05 | 3.32 | 13.6 | 0.02 | 0.05 | 72.9 | 72.9 | 0.05 | 7.45 | 7.49 | 3377 | 3377 | 0.08 | 0.19 | 1.99 | 3437 |
| 2030 | | 0.03 | 22.2 | 0.13 | 0.41 | < 0.005 | < 0.005 | 4.09 | 4.09 | < 0.005 | 0.42 | 0.42 | 87 | 87 | < 0.005 | < 0.005 | 0.08 | 88 |
| Annual | | | | | | | | | | | | | | | | | | |
| 2025 | | 0.17 | 0.17 | 1.01 | 6.38 | 0.01 | 0.02 | 8.97 | 8.99 | 0.02 | 1.03 | 1.05 | 1088 | 1088 | 0.04 | 0.02 | 0.28 | 1095 |
| 2026 | | 0.17 | 0.16 | 0.85 | 3.2 | < 0.005 | 0.01 | 18.6 | 18.6 | 0.01 | 1.9 | 1.91 | 754 | 754 | 0.02 | 0.05 | 0.63 | 769 |
| 2027 | | 0.16 | 0.15 | 0.82 | 3.13 | < 0.005 | 0.01 | 18.6 | 18.6 | 0.01 | 1.9 | 1.91 | 746 | 746 | 0.02 | 0.05 | 0.57 | 761 |
| 2028 | | 0.16 | 0.15 | 0.79 | 3.07 | < 0.005 | 0.01 | 18.6 | 18.6 | 0.01 | 1.9 | 1.91 | 738 | 738 | 0.02 | 0.05 | 0.52 | 753 |
| 2029 | | 0.11 | 0.74 | 0.61 | 2.48 | < 0.005 | 0.01 | 13.3 | 13.3 | 0.01 | 1.36 | 1.37 | 559 | 559 | 0.01 | 0.03 | 0.33 | 569 |
| 2030 | | 0.01 | 4.05 | 0.02 | 0.08 | < 0.005 | < 0.005 | 0.75 | 0.75 | < 0.005 | 0.08 | 0.08 | 14.4 | 14.4 | < 0.005 | < 0.005 | 0.01 | 14.6 |

3. Construction Emissions Details

3.1. Site Preparation (2025) - Unmitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 3.94 | 3.31 | 31.6 | 30.2 | 0.05 | 1.37 | | 1.37 | 1.26 | | 1.26 | 5295 | 5295 | 0.21 | 0.04 | | 5314 |
| Dust From Material Movement | | | | | | | | 7.67 | 7.67 | | 3.94 | 3.94 | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.42 | 0.35 | 3.38 | 3.22 | 0.01 | 0.15 | | 0.15 | 0.13 | | 0.13 | 566 | 566 | 0.02 | < 0.005 | | 568 |
| Dust From Material Movement | | | | | | | | 0.82 | 0.82 | | 0.42 | 0.42 | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.08 | 0.06 | 0.62 | 0.59 | < 0.005 | 0.03 | | 0.03 | 0.02 | | 0.02 | 93.7 | 93.7 | < 0.005 | < 0.005 | | 94 |
| Dust From Material Movement | | | | | | | | 0.15 | 0.15 | | 0.08 | 0.08 | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | | 0.09 | 0.08 | 0.06 | 1.1 | 0 | 0 | 10.9 | 10.9 | 0 | 1.11 | 1.11 | | 196 | 196 | 0.01 | 0.01 | 0.76 | 199 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | | |
| Average Daily | | | | | | | | | | | | | | | | | | | |
| Worker | | 0.01 | 0.01 | 0.01 | 0.09 | 0 | 0 | 1.13 | 1.13 | 0 | 0.11 | 0.11 | | 19.3 | 19.3 | < 0.005 | < 0.005 | 0.03 | 19.6 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | | |
| Worker | < 0.005 | < 0.005 | < 0.005 | | 0.02 | 0 | 0 | 0.21 | 0.21 | 0 | 0.02 | 0.02 | | 3.19 | 3.19 | < 0.005 | < 0.005 | 0.01 | 3.24 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |

3.2. Site Preparation (2025) - Mitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.5 | 0.5 | 2.59 | 28.3 | 0.05 | 0.1 | | 0.1 | 0.1 | | 0.1 | | 5295 | 5295 | 0.21 | 0.04 | | 5314 |
| Dust From Material Movement | | | | | | | | 7.67 | 7.67 | | 3.94 | 3.94 | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | | |
| Average Daily | | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.05 | 0.05 | 0.28 | 3.02 | 0.01 | 0.01 | | 0.01 | 0.01 | | 0.01 | | 566 | 566 | 0.02 | < 0.005 | | 568 |
| Dust From Material Movement | | | | | | | | 0.82 | 0.82 | | 0.42 | 0.42 | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.01 | 0.01 | 0.05 | 0.55 | < 0.005 | | < 0.005 | < 0.005 | | < 0.005 | | | 93.7 | 93.7 | < 0.005 | < 0.005 | | 94 |
| Dust From Material Movement | | | | | | | | 0.15 | 0.15 | | 0.08 | 0.08 | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | | |
| Worker | | 0.09 | 0.08 | 0.06 | 1.1 | 0 | 0 | 10.9 | 10.9 | 0 | 1.11 | 1.11 | | 196 | 196 | 0.01 | 0.01 | 0.76 | 199 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | | |
| Average Daily | | | | | | | | | | | | | | | | | | | |
| Worker | | 0.01 | 0.01 | 0.01 | 0.09 | 0 | 0 | 1.13 | 1.13 | 0 | 0.11 | 0.11 | | 19.3 | 19.3 | < 0.005 | < 0.005 | 0.03 | 19.6 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | | |
| Worker | < 0.005 | < 0.005 | < 0.005 | | 0.02 | 0 | 0 | 0.21 | 0.21 | 0 | 0.02 | 0.02 | | 3.19 | 3.19 | < 0.005 | < 0.005 | 0.01 | 3.24 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |

3.3. Grading (2025) - Unmitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 3.8 | 3.2 | 29.7 | 28.3 | 0.06 | 1.23 | | 1.23 | 1.14 | | 1.14 | | 6599 | 6599 | 0.27 | 0.05 | | 6622 |
| Dust From Material Movement | | | | | | | | 3.59 | 3.59 | | 1.42 | 1.42 | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 3.8 | 3.2 | 29.7 | 28.3 | 0.06 | 1.23 | | 1.23 | 1.14 | | 1.14 | | 6599 | 6599 | 0.27 | 0.05 | | 6622 |
| Dust From Material Movement | | | | | | | | 3.59 | 3.59 | | 1.42 | 1.42 | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 1.06 | 0.89 | 8.29 | 7.91 | 0.02 | 0.35 | | 0.35 | 0.32 | | 0.32 | | 1844 | 1844 | 0.07 | 0.01 | | 1850 |
| Dust From Material Movement | | | | | | | | 1 | 1 | | 0.4 | 0.4 | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.19 | 0.16 | 1.51 | 1.44 | < 0.005 | | 0.06 | | 0.06 | | 0.06 | | 305 | 305 | 0.01 | < 0.005 | | 306 |
| Dust From Material Movement | | | | | | | | 0.18 | 0.18 | | 0.07 | 0.07 | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | | |
| Worker | | 0.1 | 0.1 | 0.07 | 1.26 | 0 | 0 | 12.4 | 12.4 | 0 | 1.26 | 1.26 | | 224 | 224 | 0.01 | 0.01 | 0.87 | 228 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.09 | 0.09 | 0.09 | 0.99 | 0 | 0 | 12.4 | 12.4 | 0 | 1.26 | 1.26 | | 202 | 202 | 0.01 | 0.01 | 0.02 | 204 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Worker | | 0.03 | 0.02 | 0.02 | 0.28 | 0 | 0 | 3.37 | 3.37 | 0 | 0.34 | 0.34 | | 57.6 | 57.6 | < 0.005 | < 0.005 | 0.1 | 58.4 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Worker | < 0.005 | < 0.005 | < 0.005 | | 0.05 | 0 | 0 | 0.61 | 0.61 | 0 | 0.06 | 0.06 | | 9.54 | 9.54 | < 0.005 | < 0.005 | 0.02 | 9.68 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |

3.4. Grading (2025) - Mitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.64 | 0.64 | 4.43 | 35.3 | 0.06 | 0.12 | | 0.12 | 0.12 | | 0.12 | | 6599 | 6599 | 0.27 | 0.05 | | 6622 |
| Dust From Material Movement | | | | | | | | 3.59 | 3.59 | | 1.42 | 1.42 | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.64 | 0.64 | 4.43 | 35.3 | 0.06 | 0.12 | | 0.12 | 0.12 | | 0.12 | | 6599 | 6599 | 0.27 | 0.05 | | 6622 |
| Dust From Material Movement | | | | | | | | 3.59 | 3.59 | | 1.42 | 1.42 | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.18 | 0.18 | 1.24 | 9.88 | 0.02 | 0.03 | | 0.03 | 0.03 | | 0.03 | | 1844 | 1844 | 0.07 | 0.01 | | 1850 |
| Dust From Material Movement | | | | | | | | 1 | 1 | | 0.4 | 0.4 | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.03 | 0.03 | 0.23 | 1.8 | < 0.005 | 0.01 | | 0.01 | 0.01 | | 0.01 | | 305 | 305 | 0.01 | < 0.005 | | 306 |
| Dust From Material Movement | | | | | | | | 0.18 | 0.18 | | 0.07 | 0.07 | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.1 | 0.1 | 0.07 | 1.26 | 0 | 0 | 12.4 | 12.4 | 0 | 1.26 | 1.26 | | 224 | 224 | 0.01 | 0.01 | 0.87 | 228 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.09 | 0.09 | 0.09 | 0.99 | 0 | 0 | 12.4 | 12.4 | 0 | 1.26 | 1.26 | | 202 | 202 | 0.01 | 0.01 | 0.02 | 204 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Worker | | 0.03 | 0.02 | 0.02 | 0.28 | 0 | 0 | 3.37 | 3.37 | 0 | 0.34 | 0.34 | | 57.6 | 57.6 | < 0.005 | < 0.005 | 0.1 | 58.4 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Worker | < 0.005 | < 0.005 | < 0.005 | | 0.05 | 0 | 0 | 0.61 | 0.61 | 0 | 0.06 | 0.06 | | 9.54 | 9.54 | < 0.005 | < 0.005 | 0.02 | 9.68 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |

3.5. Building Construction (2025) - Unmitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 1.35 | 1.13 | 10.4 | 13 | 0.02 | 0.43 | | 0.43 | 0.4 | | 0.4 | | 2398 | 2398 | 0.1 | 0.02 | | 2406 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.21 | 0.17 | 1.59 | 1.99 | < 0.005 | | 0.07 | | 0.07 | 0.06 | | 0.06 | | 366 | 366 | 0.01 | < 0.005 | | 367 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.04 | 0.03 | 0.29 | 0.36 | < 0.005 | | 0.01 | | 0.01 | 0.01 | | 0.01 | | 60.6 | 60.6 | < 0.005 | < 0.005 | | 60.8 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.93 | 0.84 | 0.87 | 9.76 | 0 | 0 | 122 | 122 | 0 | 12.4 | 12.4 | | 1987 | 1987 | 0.05 | 0.08 | 0.22 | 2012 |
| Vendor | | 0.07 | 0.06 | 3.24 | 0.55 | 0.01 | 0.02 | 24.5 | 24.6 | 0.02 | 2.53 | 2.55 | | 2019 | 2019 | < 0.005 | 0.31 | 0.12 | 2110 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | |
| Worker | | 0.14 | 0.13 | 0.12 | 1.52 | 0 | 0 | 18.1 | 18.1 | 0 | 1.85 | 1.85 | 310 | 310 | 0.01 | 0.01 | 0.56 | 314 |
| Vendor | | 0.01 | 0.01 | 0.49 | 0.08 | < 0.005 | < 0.005 | 3.64 | 3.64 | < 0.005 | 0.38 | 0.38 | 308 | 308 | < 0.005 | 0.05 | 0.32 | 322 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Worker | | 0.03 | 0.02 | 0.02 | 0.28 | 0 | 0 | 3.3 | 3.3 | 0 | 0.34 | 0.34 | 51.3 | 51.3 | < 0.005 | < 0.005 | 0.09 | 52 |
| Vendor | < 0.005 | < 0.005 | | 0.09 | 0.02 | < 0.005 | < 0.005 | 0.66 | 0.67 | < 0.005 | 0.07 | 0.07 | 51 | 51 | < 0.005 | 0.01 | 0.05 | 53.4 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

3.6. Building Construction (2025) - Mitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.35 | 0.33 | 2.82 | 14.8 | 0.02 | 0.08 | | 0.08 | 0.07 | | 0.07 | 2398 | 2398 | 0.1 | 0.02 | | 2406 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.05 | 0.05 | 0.43 | 2.26 | < 0.005 | | 0.01 | | 0.01 | 0.01 | | 0.01 | 366 | 366 | 0.01 | < 0.005 | | 367 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.01 | 0.01 | 0.08 | 0.41 | < 0.005 | < 0.005 | | < 0.005 | < 0.005 | | < 0.005 | | 60.6 | 60.6 | < 0.005 | < 0.005 | | 60.8 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.93 | 0.84 | 0.87 | 9.76 | 0 | 0 | 122 | 122 | 0 | 12.4 | 12.4 | 1987 | 1987 | 0.05 | 0.08 | 0.22 | 2012 |
| Vendor | | 0.07 | 0.06 | 3.24 | 0.55 | 0.01 | 0.02 | 24.5 | 24.6 | 0.02 | 2.53 | 2.55 | 2019 | 2019 | < 0.005 | 0.31 | 0.12 | 2110 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Worker | | 0.14 | 0.13 | 0.12 | 1.52 | 0 | 0 | 18.1 | 18.1 | 0 | 1.85 | 1.85 | 310 | 310 | 0.01 | 0.01 | 0.56 | 314 |
| Vendor | | 0.01 | 0.01 | 0.49 | 0.08 | < 0.005 | < 0.005 | 3.64 | 3.64 | < 0.005 | 0.38 | 0.38 | 308 | 308 | < 0.005 | 0.05 | 0.32 | 322 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Worker | | 0.03 | 0.02 | 0.02 | 0.28 | 0 | 0 | 3.3 | 3.3 | 0 | 0.34 | 0.34 | 51.3 | 51.3 | < 0.005 | < 0.005 | 0.09 | 52 |
| Vendor | < 0.005 | < 0.005 | | 0.09 | 0.02 | < 0.005 | < 0.005 | 0.66 | 0.67 | < 0.005 | 0.07 | 0.07 | 51 | 51 | < 0.005 | 0.01 | 0.05 | 53.4 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

3.7. Building Construction (2026) - Unmitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 1.28 | 1.07 | 9.85 | 13 | 0.02 | 0.38 | | 0.38 | 0.35 | | 0.35 | 2397 | 2397 | 0.1 | 0.02 | | 2405 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 1.28 | 1.07 | 9.85 | 13 | 0.02 | 0.38 | | 0.38 | 0.35 | | 0.35 | 2397 | 2397 | 0.1 | 0.02 | | 2405 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.91 | 0.77 | 7.04 | 9.26 | 0.02 | 0.27 | | 0.27 | 0.25 | | 0.25 | 1712 | 1712 | 0.07 | 0.01 | | 1718 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.17 | 0.14 | 1.28 | 1.69 | < 0.005 | | 0.05 | | 0.05 | 0.05 | | 0.05 | 283 | 283 | 0.01 | < 0.005 | | 284 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.98 | 0.9 | 0.58 | 11.6 | 0 | 0 | 122 | 122 | 0 | 12.4 | 12.4 | 2167 | 2167 | 0.03 | 0.08 | 7.82 | 2199 |
| Vendor | | 0.06 | 0.06 | 2.87 | 0.5 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | 1987 | 1987 | < 0.005 | 0.31 | 4.44 | 2083 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.9 | 0.81 | 0.8 | 9.09 | 0 | 0 | 122 | 122 | 0 | 12.4 | 12.4 | 1950 | 1950 | 0.05 | 0.08 | 0.2 | 1976 |
| Vendor | | 0.06 | 0.06 | 3.03 | 0.53 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | 1987 | 1987 | < 0.005 | 0.31 | 0.12 | 2079 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Worker | | 0.64 | 0.58 | 0.52 | 6.59 | 0 | 0 | 84.7 | 84.7 | 0 | 8.64 | 8.64 | 1423 | 1423 | 0.03 | 0.06 | 2.41 | 1443 |
| Vendor | | 0.04 | 0.04 | 2.14 | 0.37 | 0.01 | 0.01 | 17 | 17 | 0.01 | 1.76 | 1.77 | 1419 | 1419 | < 0.005 | 0.22 | 1.37 | 1486 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Worker | | 0.12 | 0.11 | 0.09 | 1.2 | 0 | 0 | 15.5 | 15.5 | 0 | 1.58 | 1.58 | 236 | 236 | 0.01 | 0.01 | 0.4 | 239 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.01 | 0.01 | 0.39 | 0.07 | < 0.005 | < 0.005 | | 3.11 | 3.11 | < 0.005 | 0.32 | 0.32 | | 235 | 235 | < 0.005 | 0.04 | 0.23 | 246 |
| Hauling | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |

3.8. Building Construction (2026) - Mitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.35 | 0.33 | 2.82 | 14.8 | 0.02 | 0.07 | | 0.07 | 0.07 | | 0.07 | | 2397 | 2397 | 0.1 | 0.02 | | 2405 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.35 | 0.33 | 2.82 | 14.8 | 0.02 | 0.07 | | 0.07 | 0.07 | | 0.07 | | 2397 | 2397 | 0.1 | 0.02 | | 2405 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.25 | 0.23 | 2.01 | 10.6 | 0.02 | 0.05 | | 0.05 | 0.05 | | 0.05 | | 1712 | 1712 | 0.07 | 0.01 | | 1718 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.05 | 0.04 | 0.37 | 1.93 | < 0.005 | 0.01 | | 0.01 | 0.01 | | 0.01 | | 283 | 283 | 0.01 | < 0.005 | | 284 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.98 | 0.9 | 0.58 | 11.6 | 0 | 0 | 122 | 122 | 0 | 12.4 | 12.4 | | 2167 | 2167 | 0.03 | 0.08 | 7.82 | 2199 |
| Vendor | | 0.06 | 0.06 | 2.87 | 0.5 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | | 1987 | 1987 | < 0.005 | 0.31 | 4.44 | 2083 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.9 | 0.81 | 0.8 | 9.09 | 0 | 0 | 122 | 122 | 0 | 12.4 | 12.4 | | 1950 | 1950 | 0.05 | 0.08 | 0.2 | 1976 |
| Vendor | | 0.06 | 0.06 | 3.03 | 0.53 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | | 1987 | 1987 | < 0.005 | 0.31 | 0.12 | 2079 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Worker | | 0.64 | 0.58 | 0.52 | 6.59 | 0 | 0 | 84.7 | 84.7 | 0 | 8.64 | 8.64 | | 1423 | 1423 | 0.03 | 0.06 | 2.41 | 1443 |
| Vendor | | 0.04 | 0.04 | 2.14 | 0.37 | 0.01 | 0.01 | 17 | 17 | 0.01 | 1.76 | 1.77 | | 1419 | 1419 | < 0.005 | 0.22 | 1.37 | 1486 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Worker | | 0.12 | 0.11 | 0.09 | 1.2 | 0 | 0 | 15.5 | 15.5 | 0 | 1.58 | 1.58 | | 236 | 236 | 0.01 | 0.01 | 0.4 | 239 |
| Vendor | | 0.01 | 0.01 | 0.39 | 0.07 | < 0.005 | < 0.005 | | 3.11 | 3.11 | < 0.005 | 0.32 | 0.32 | | 235 | 235 | < 0.005 | 0.04 | 0.23 | 246 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |

3.9. Building Construction (2027) - Unmitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 1.23 | 1.03 | 9.39 | 12.9 | 0.02 | 0.34 | | 0.34 | 0.31 | | 0.31 | | 2397 | 2397 | 0.1 | 0.02 | | 2405 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 1.23 | 1.03 | 9.39 | 12.9 | 0.02 | 0.34 | | 0.34 | 0.31 | | 0.31 | | 2397 | 2397 | 0.1 | 0.02 | | 2405 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.88 | 0.74 | 6.71 | 9.24 | 0.02 | 0.24 | | 0.24 | 0.22 | | 0.22 | | 1712 | 1712 | 0.07 | 0.01 | | 1718 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.16 | 0.13 | 1.22 | 1.69 | < 0.005 | 0.04 | | 0.04 | 0.04 | | 0.04 | | 283 | 283 | 0.01 | < 0.005 | | 284 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.94 | 0.86 | 0.57 | 10.9 | 0 | 0 | 122 | 122 | 0 | 12.4 | 12.4 | | 2131 | 2131 | 0.03 | 0.08 | 7.12 | 2161 |
| Vendor | | 0.06 | 0.05 | 2.71 | 0.49 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | | 1950 | 1950 | < 0.005 | 0.29 | 4.04 | 2042 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.81 | 0.78 | 0.73 | 8.5 | 0 | 0 | 122 | 122 | 0 | 12.4 | 12.4 | | 1918 | 1918 | 0.05 | 0.08 | 0.18 | 1943 |
| Vendor | | 0.06 | 0.04 | 2.86 | 0.52 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | | 1950 | 1950 | < 0.005 | 0.29 | 0.1 | 2038 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Worker | | 0.58 | 0.56 | 0.47 | 6.19 | 0 | 0 | 84.7 | 84.7 | 0 | 8.64 | 8.64 | | 1400 | 1400 | 0.03 | 0.06 | 2.2 | 1420 |
| Vendor | | 0.04 | 0.03 | 2.02 | 0.36 | 0.01 | 0.01 | 17 | 17 | 0.01 | 1.76 | 1.77 | | 1393 | 1393 | < 0.005 | 0.21 | 1.25 | 1457 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Worker | | 0.1 | 0.1 | 0.09 | 1.13 | 0 | 0 | 15.5 | 15.5 | 0 | 1.58 | 1.58 | | 232 | 232 | 0.01 | 0.01 | 0.36 | 235 |
| Vendor | | 0.01 | 0.01 | 0.37 | 0.07 | < 0.005 | < 0.005 | | 3.11 | 3.11 | < 0.005 | 0.32 | 0.32 | | 231 | 231 | < 0.005 | 0.03 | 0.21 | 241 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |

3.10. Building Construction (2027) - Mitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.35 | 0.33 | 2.82 | 14.8 | 0.02 | 0.07 | | 0.07 | 0.07 | | 0.07 | | 2397 | 2397 | 0.1 | 0.02 | | 2405 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.35 | 0.33 | 2.82 | 14.8 | 0.02 | 0.07 | | 0.07 | 0.07 | | 0.07 | | 2397 | 2397 | 0.1 | 0.02 | | 2405 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.25 | 0.23 | 2.01 | 10.6 | 0.02 | 0.05 | | 0.05 | 0.05 | | 0.05 | | 1712 | 1712 | 0.07 | 0.01 | | 1718 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.05 | 0.04 | 0.37 | 1.93 | < 0.005 | 0.01 | | 0.01 | 0.01 | | 0.01 | | 283 | 283 | 0.01 | < 0.005 | | 284 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.94 | 0.86 | 0.57 | 10.9 | 0 | 0 | 122 | 122 | 0 | 12.4 | 12.4 | | 2131 | 2131 | 0.03 | 0.08 | 7.12 | 2161 |
| Vendor | | 0.06 | 0.05 | 2.71 | 0.49 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | | 1950 | 1950 | < 0.005 | 0.29 | 4.04 | 2042 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.81 | 0.78 | 0.73 | 8.5 | 0 | 0 | 122 | 122 | 0 | 12.4 | 12.4 | | 1918 | 1918 | 0.05 | 0.08 | 0.18 | 1943 |
| Vendor | | 0.06 | 0.04 | 2.86 | 0.52 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | | 1950 | 1950 | < 0.005 | 0.29 | 0.1 | 2038 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Worker | | 0.58 | 0.56 | 0.47 | 6.19 | 0 | 0 | 84.7 | 84.7 | 0 | 8.64 | 8.64 | | 1400 | 1400 | 0.03 | 0.06 | 2.2 | 1420 |
| Vendor | | 0.04 | 0.03 | 2.02 | 0.36 | 0.01 | 0.01 | 17 | 17 | 0.01 | 1.76 | 1.77 | | 1393 | 1393 | < 0.005 | 0.21 | 1.25 | 1457 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Worker | | 0.1 | 0.1 | 0.09 | 1.13 | 0 | 0 | 15.5 | 15.5 | 0 | 1.58 | 1.58 | | 232 | 232 | 0.01 | 0.01 | 0.36 | 235 |
| Vendor | | 0.01 | 0.01 | 0.37 | 0.07 | < 0.005 | < 0.005 | 3.11 | 3.11 | < 0.005 | 0.32 | 0.32 | | 231 | 231 | < 0.005 | 0.03 | 0.21 | 241 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |

3.11. Building Construction (2028) - Unmitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 1.18 | 0.99 | 8.92 | 12.9 | 0.02 | 0.3 | | 0.3 | 0.28 | | 0.28 | | 2397 | 2397 | 0.1 | 0.02 | | 2406 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 1.18 | 0.99 | 8.92 | 12.9 | 0.02 | 0.3 | | 0.3 | 0.28 | | 0.28 | | 2397 | 2397 | 0.1 | 0.02 | | 2406 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.85 | 0.71 | 6.39 | 9.26 | 0.02 | 0.22 | | 0.22 | 0.2 | | 0.2 | | 1717 | 1717 | 0.07 | 0.01 | | 1723 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.15 | 0.13 | 1.17 | 1.69 | < 0.005 | 0.04 | | 0.04 | 0.04 | | 0.04 | | 284 | 284 | 0.01 | < 0.005 | | 285 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.84 | 0.83 | 0.51 | 10.2 | 0 | 0 | 122 | 122 | 0 | 12.4 | 12.4 | | 2089 | 2089 | 0.03 | 0.08 | 6.47 | 2119 |
| Vendor | | 0.06 | 0.05 | 2.55 | 0.47 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | | 1904 | 1904 | < 0.005 | 0.29 | 3.64 | 1996 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.77 | 0.69 | 0.66 | 7.97 | 0 | 0 | 122 | 122 | 0 | 12.4 | 12.4 | | 1881 | 1881 | 0.04 | 0.08 | 0.17 | 1906 |
| Vendor | | 0.06 | 0.04 | 2.69 | 0.49 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | | 1905 | 1905 | < 0.005 | 0.29 | 0.09 | 1992 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Worker | | 0.56 | 0.54 | 0.42 | 5.85 | 0 | 0 | 85 | 85 | 0 | 8.66 | 8.66 | | 1376 | 1376 | 0.03 | 0.06 | 2 | 1396 |
| Vendor | | 0.04 | 0.03 | 1.9 | 0.34 | 0.01 | 0.01 | 17.1 | 17.1 | 0.01 | 1.76 | 1.77 | | 1364 | 1364 | < 0.005 | 0.21 | 1.12 | 1428 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Worker | | 0.1 | 0.1 | 0.08 | 1.07 | 0 | 0 | 15.5 | 15.5 | 0 | 1.58 | 1.58 | | 228 | 228 | < 0.005 | 0.01 | 0.33 | 231 |
| Vendor | | 0.01 | 0.01 | 0.35 | 0.06 | < 0.005 | < 0.005 | 3.12 | 3.12 | < 0.005 | 0.32 | 0.32 | | 226 | 226 | < 0.005 | 0.03 | 0.19 | 236 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |

3.12. Building Construction (2028) - Mitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.35 | 0.33 | 2.81 | 14.8 | 0.02 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 2397 | 2397 | 0.1 | 0.02 | | 2406 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.35 | 0.33 | 2.81 | 14.8 | 0.02 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 2397 | 2397 | 0.1 | 0.02 | | 2406 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.25 | 0.24 | 2.02 | 10.6 | 0.02 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 1717 | 1717 | 0.07 | 0.01 | | 1723 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.05 | 0.04 | 0.37 | 1.94 | < 0.005 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 284 | 284 | 0.01 | < 0.005 | | 285 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.84 | 0.83 | 0.51 | 10.2 | 0 | 0 | 122 | 122 | 0 | 12.4 | 12.4 | 2089 | 2089 | 0.03 | 0.08 | 6.47 | 2119 |
| Vendor | | 0.06 | 0.05 | 2.55 | 0.47 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | 1904 | 1904 | < 0.005 | 0.29 | 3.64 | 1996 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.77 | 0.69 | 0.66 | 7.97 | 0 | 0 | 122 | 122 | 0 | 12.4 | 12.4 | 1881 | 1881 | 0.04 | 0.08 | 0.17 | 1906 |
| Vendor | | 0.06 | 0.04 | 2.69 | 0.49 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | 1905 | 1905 | < 0.005 | 0.29 | 0.09 | 1992 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Worker | | 0.56 | 0.54 | 0.42 | 5.85 | 0 | 0 | 85 | 85 | 0 | 8.66 | 8.66 | 1376 | 1376 | 0.03 | 0.06 | 2 | 1396 |
| Vendor | | 0.04 | 0.03 | 1.9 | 0.34 | 0.01 | 0.01 | 17.1 | 17.1 | 0.01 | 1.76 | 1.77 | 1364 | 1364 | < 0.005 | 0.21 | 1.12 | 1428 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Worker | | 0.1 | 0.1 | 0.08 | 1.07 | 0 | 0 | 15.5 | 15.5 | 0 | 1.58 | 1.58 | 228 | 228 | < 0.005 | 0.01 | 0.33 | 231 |
| Vendor | | 0.01 | 0.01 | 0.35 | 0.06 | < 0.005 | < 0.005 | 3.12 | 3.12 | < 0.005 | 0.32 | 0.32 | 226 | 226 | < 0.005 | 0.03 | 0.19 | 236 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

3.13. Building Construction (2029) - Unmitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 1.15 | 0.97 | 8.58 | 12.9 | 0.02 | 0.28 | 0.28 | 0.25 | 0.25 | 0.25 | 2397 | 2397 | 0.1 | 0.02 | | 2405 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 1.15 | 0.97 | 8.58 | 12.9 | 0.02 | 0.28 | 0.28 | 0.25 | 0.25 | 0.25 | 2397 | 2397 | 0.1 | 0.02 | | 2405 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.57 | 0.48 | 4.25 | 6.39 | 0.01 | 0.14 | 0.14 | 0.13 | 0.13 | 0.13 | 1187 | 1187 | 0.05 | 0.01 | | 1191 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.1 | 0.09 | 0.78 | 1.17 | < 0.005 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 196 | 196 | 0.01 | < 0.005 | | 197 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.81 | 0.74 | 0.44 | 9.57 | 0 | 0 | 122 | 122 | 0 | 12.4 | 12.4 | 2054 | 2054 | 0.03 | 0.08 | 5.84 | 2083 |
| Vendor | | 0.06 | 0.05 | 2.39 | 0.46 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | 1850 | 1850 | < 0.005 | 0.28 | 3.25 | 1938 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.75 | 0.67 | 0.59 | 7.46 | 0 | 0 | 122 | 122 | 0 | 12.4 | 12.4 | 1850 | 1850 | 0.04 | 0.08 | 0.15 | 1874 |
| Vendor | | 0.06 | 0.04 | 2.52 | 0.48 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | 1851 | 1851 | < 0.005 | 0.28 | 0.08 | 1935 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Worker | | 0.37 | 0.33 | 0.29 | 3.77 | 0 | 0 | 58.7 | 58.7 | 0 | 5.99 | 5.99 | 935 | 935 | 0.02 | 0.04 | 1.25 | 948 |
| Vendor | | 0.03 | 0.02 | 1.24 | 0.23 | 0.01 | 0.01 | 11.8 | 11.8 | 0.01 | 1.22 | 1.22 | 916 | 916 | < 0.005 | 0.14 | 0.7 | 958 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Worker | | 0.07 | 0.06 | 0.05 | 0.69 | 0 | 0 | 10.7 | 10.7 | 0 | 1.09 | 1.09 | 155 | 155 | < 0.005 | 0.01 | 0.21 | 157 |
| Vendor | | 0.01 | < 0.005 | 0.23 | 0.04 | < 0.005 | < 0.005 | 2.16 | 2.16 | < 0.005 | 0.22 | 0.22 | 152 | 152 | < 0.005 | 0.02 | 0.12 | 159 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

3.14. Building Construction (2029) - Mitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.35 | 0.33 | 2.81 | 14.8 | 0.02 | 0.07 | | 0.07 | 0.07 | | 0.07 | 2397 | 2397 | 0.1 | 0.02 | | 2405 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.35 | 0.33 | 2.81 | 14.8 | 0.02 | 0.07 | | 0.07 | 0.07 | | 0.07 | 2397 | 2397 | 0.1 | 0.02 | | 2405 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.17 | 0.16 | 1.39 | 7.34 | 0.01 | 0.04 | | 0.04 | 0.04 | | 0.04 | 1187 | 1187 | 0.05 | 0.01 | | 1191 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.03 | 0.03 | 0.25 | 1.34 | < 0.005 | 0.01 | | 0.01 | 0.01 | | 0.01 | 196 | 196 | 0.01 | < 0.005 | | 197 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.81 | 0.74 | 0.44 | 9.57 | 0 | 0 | 122 | 122 | 0 | 12.4 | 12.4 | 2054 | 2054 | 0.03 | 0.08 | 5.84 | 2083 |
| Vendor | | 0.06 | 0.05 | 2.39 | 0.46 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | 1850 | 1850 | < 0.005 | 0.28 | 3.25 | 1938 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.75 | 0.67 | 0.59 | 7.46 | 0 | 0 | 122 | 122 | 0 | 12.4 | 12.4 | 1850 | 1850 | 0.04 | 0.08 | 0.15 | 1874 |
| Vendor | | 0.06 | 0.04 | 2.52 | 0.48 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | 1851 | 1851 | < 0.005 | 0.28 | 0.08 | 1935 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Worker | | 0.37 | 0.33 | 0.29 | 3.77 | 0 | 0 | 58.7 | 58.7 | 0 | 5.99 | 5.99 | 935 | 935 | 0.02 | 0.04 | 1.25 | 948 |
| Vendor | | 0.03 | 0.02 | 1.24 | 0.23 | 0.01 | 0.01 | 11.8 | 11.8 | 0.01 | 1.22 | 1.22 | 916 | 916 | < 0.005 | 0.14 | 0.7 | 958 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Worker | | 0.07 | 0.06 | 0.05 | 0.69 | 0 | 0 | 10.7 | 10.7 | 0 | 1.09 | 1.09 | 155 | 155 | < 0.005 | 0.01 | 0.21 | 157 |
| Vendor | | 0.01 | < 0.005 | 0.23 | 0.04 | < 0.005 | < 0.005 | 2.16 | 2.16 | < 0.005 | 0.22 | 0.22 | 152 | 152 | < 0.005 | 0.02 | 0.12 | 159 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

3.15. Paving (2029) - Unmitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.8 | 0.67 | 6.46 | 9.92 | 0.01 | 0.24 | | 0.24 | 0.22 | | 0.22 | 1511 | 1511 | 0.06 | 0.01 | | 1516 |
| Paving | | | 2.39 | | | | | | | | | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.8 | 0.67 | 6.46 | 9.92 | 0.01 | 0.24 | | 0.24 | 0.22 | | 0.22 | 1511 | 1511 | 0.06 | 0.01 | | 1516 |
| Paving | | | 2.39 | | | | | | | | | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.16 | 0.13 | 1.27 | 1.96 | < 0.005 | 0.05 | | 0.05 | 0.04 | | 0.04 | 298 | 298 | 0.01 | < 0.005 | | 299 |
| Paving | | | 0.47 | | | | | | | | | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.03 | 0.02 | 0.23 | 0.36 | < 0.005 | 0.01 | | 0.01 | 0.01 | | 0.01 | 49.3 | 49.3 | < 0.005 | < 0.005 | | 49.5 |
| Paving | | | 0.09 | | | | | | | | | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.06 | 0.06 | 0.03 | 0.73 | 0 | 0 | 9.3 | 9.3 | 0 | 0.95 | 0.95 | 157 | 157 | < 0.005 | 0.01 | 0.44 | 159 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.06 | 0.05 | 0.05 | 0.57 | 0 | 0 | 9.3 | 9.3 | 0 | 0.95 | 0.95 | 141 | 141 | < 0.005 | 0.01 | 0.01 | 143 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Worker | | 0.01 | 0.01 | 0.01 | 0.11 | 0 | 0 | 1.78 | 1.78 | 0 | 0.18 | 0.18 | 28.4 | 28.4 | < 0.005 | < 0.005 | 0.04 | 28.8 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Worker | < 0.005 | < 0.005 | < 0.005 | | 0.02 | 0 | 0 | 0.33 | 0.33 | 0 | 0.03 | 0.03 | 4.7 | 4.7 | < 0.005 | < 0.005 | 0.01 | 4.77 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

3.16. Paving (2029) - Mitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.16 | 0.16 | 1.93 | 10.6 | 0.01 | 0.03 | | 0.03 | 0.03 | | 0.03 | 1511 | 1511 | 0.06 | 0.01 | | 1516 |
| Paving | | | 2.39 | | | | | | | | | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.16 | 0.16 | 1.93 | 10.6 | 0.01 | 0.03 | | 0.03 | 0.03 | | 0.03 | 1511 | 1511 | 0.06 | 0.01 | | 1516 |
| Paving | | | 2.39 | | | | | | | | | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.03 | 0.03 | 0.38 | 2.09 | < 0.005 | | 0.01 | | 0.01 | 0.01 | | 0.01 | 298 | 298 | 0.01 | < 0.005 | | 299 |
| Paving | | | 0.47 | | | | | | | | | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.01 | 0.01 | 0.07 | 0.38 | < 0.005 | < 0.005 | | < 0.005 | < 0.005 | | < 0.005 | 49.3 | 49.3 | < 0.005 | < 0.005 | | 49.5 |
| Paving | | | 0.09 | | | | | | | | | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.06 | 0.06 | 0.03 | 0.73 | 0 | 0 | 9.3 | 9.3 | 0 | 0.95 | 0.95 | 157 | 157 | < 0.005 | 0.01 | 0.44 | 159 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.06 | 0.05 | 0.05 | 0.57 | 0 | 0 | 9.3 | 9.3 | 0 | 0.95 | 0.95 | 141 | 141 | < 0.005 | 0.01 | 0.01 | 143 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Worker | | 0.01 | 0.01 | 0.01 | 0.11 | 0 | 0 | 1.78 | 1.78 | 0 | 0.18 | 0.18 | 28.4 | 28.4 | < 0.005 | < 0.005 | 0.04 | 28.8 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Worker | < 0.005 | < 0.005 | < 0.005 | | 0.02 | 0 | 0 | 0.33 | 0.33 | 0 | 0.03 | 0.03 | 4.7 | 4.7 | < 0.005 | < 0.005 | 0.01 | 4.77 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

3.17. Architectural Coating (2029) - Unmitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.12 | 0.1 | 0.79 | 1.11 | < 0.005 | | 0.01 | | 0.01 | 0.01 | | 0.01 | 134 | 134 | 0.01 | < 0.005 | | 134 |
| Architectural Coatings | | | 129 | | | | | | | | | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | < 0.005 | < 0.005 | | 0.02 | 0.03 | < 0.005 | < 0.005 | | < 0.005 | < 0.005 | | < 0.005 | 3.14 | 3.14 | < 0.005 | < 0.005 | | 3.15 |
| Architectural Coatings | | | 3.02 | | | | | | | | | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | | < 0.005 | < 0.005 | | < 0.005 | | 0.52 | 0.52 | < 0.005 | < 0.005 | | 0.52 |
| Architectural Coatings | | | 0.55 | | | | | | | | | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.15 | 0.13 | 0.12 | 1.49 | 0 | 0 | 24.4 | 24.4 | 0 | 2.49 | 2.49 | 370 | 370 | 0.01 | 0.02 | 0.03 | 375 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Worker | < 0.005 | < 0.005 | < 0.005 | | 0.04 | 0 | 0 | 0.56 | 0.56 | 0 | 0.06 | 0.06 | 8.87 | 8.87 | < 0.005 | < 0.005 | 0.01 | 9 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Worker | < 0.005 | < 0.005 | < 0.005 | | 0.01 | 0 | 0 | 0.1 | 0.1 | 0 | 0.01 | 0.01 | 1.47 | 1.47 | < 0.005 | < 0.005 | < 0.005 | 1.49 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

3.18. Architectural Coating (2029) - Mitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.02 | 0.02 | 0.65 | 0.96 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | | < 0.005 | | 134 | 134 | 0.01 | < 0.005 | | 134 |
| Architectural Coatings | | | 129 | | | | | | | | | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | < 0.005 | < 0.005 | | 0.02 | 0.02 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | | < 0.005 | | 3.14 | 3.14 | < 0.005 | < 0.005 | | 3.15 |
| Architectural Coatings | | | 3.02 | | | | | | | | | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | | < 0.005 | < 0.005 | | < 0.005 | | 0.52 | 0.52 | < 0.005 | < 0.005 | | 0.52 |
| Architectural Coatings | | | 0.55 | | | | | | | | | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.15 | 0.13 | 0.12 | 1.49 | 0 | 0 | 24.4 | 24.4 | 0 | 2.49 | 2.49 | 370 | 370 | 0.01 | 0.02 | 0.03 | 375 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Worker | < 0.005 | < 0.005 | < 0.005 | | 0.04 | 0 | 0 | 0.56 | 0.56 | 0 | 0.06 | 0.06 | 8.87 | 8.87 | < 0.005 | < 0.005 | 0.01 | 9 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Worker | < 0.005 | < 0.005 | < 0.005 | | 0.01 | 0 | 0 | 0.1 | 0.1 | 0 | 0.01 | 0.01 | 1.47 | 1.47 | < 0.005 | < 0.005 | < 0.005 | 1.49 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

3.19. Architectural Coating (2030) - Unmitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.12 | 0.1 | 0.78 | 1.11 | < 0.005 | | 0.01 | | 0.01 | 0.01 | | 0.01 | 134 | 134 | 0.01 | < 0.005 | | 134 |
| Architectural Coatings | | | 129 | | | | | | | | | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.02 | 0.02 | 0.14 | 0.19 | < 0.005 | < 0.005 | | < 0.005 | < 0.005 | | < 0.005 | | 23 | 23 | < 0.005 | < 0.005 | | 23.1 |
| Architectural Coatings | | | 22.2 | | | | | | | | | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | < 0.005 | < 0.005 | | 0.02 | 0.03 | < 0.005 | < 0.005 | | < 0.005 | < 0.005 | | < 0.005 | | 3.81 | 3.81 | < 0.005 | < 0.005 | | 3.82 |
| Architectural Coatings | | | 4.04 | | | | | | | | | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.14 | 0.13 | 0.1 | 1.4 | 0 | 0 | 24.4 | 24.4 | 0 | 2.49 | 2.49 | 364 | 364 | 0.01 | 0.02 | 0.03 | 369 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Worker | | 0.02 | 0.02 | 0.02 | 0.25 | 0 | 0 | 4.09 | 4.09 | 0 | 0.42 | 0.42 | 64 | 64 | < 0.005 | < 0.005 | 0.08 | 64.9 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Worker | < 0.005 | < 0.005 | < 0.005 | | 0.04 | 0 | 0 | 0.75 | 0.75 | 0 | 0.08 | 0.08 | 10.6 | 10.6 | < 0.005 | < 0.005 | 0.01 | 10.7 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

3.20. Architectural Coating (2030) - Mitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.02 | 0.02 | 0.65 | 0.96 | < 0.005 | < 0.005 | | < 0.005 | < 0.005 | | < 0.005 | | 134 | 134 | 0.01 | < 0.005 | | 134 |
| Architectural Coatings | | | 129 | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | < 0.005 | < 0.005 | | 0.11 | 0.17 | < 0.005 | < 0.005 | | < 0.005 | < 0.005 | | < 0.005 | | 23 | 23 | < 0.005 | < 0.005 | | 23.1 |
| Architectural Coatings | | | 22.2 | | | | | | | | | | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | < 0.005 | < 0.005 | | 0.02 | 0.03 | < 0.005 | < 0.005 | | < 0.005 | < 0.005 | | < 0.005 | | 3.81 | 3.81 | < 0.005 | < 0.005 | | 3.82 |
| Architectural Coatings | | | 4.04 | | | | | | | | | | | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | | |
| Worker | | 0.14 | 0.13 | 0.1 | 1.4 | 0 | 0 | 24.4 | 24.4 | 0 | 2.49 | 2.49 | | 364 | 364 | 0.01 | 0.02 | 0.03 | 369 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | | |
| Worker | | 0.02 | 0.02 | 0.02 | 0.25 | 0 | 0 | 4.09 | 4.09 | 0 | 0.42 | 0.42 | | 64 | 64 | < 0.005 | < 0.005 | 0.08 | 64.9 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | | |
| Worker | < 0.005 | < 0.005 | < 0.005 | | 0.04 | 0 | 0 | 0.75 | 0.75 | 0 | 0.08 | 0.08 | | 10.6 | 10.6 | < 0.005 | < 0.005 | 0.01 | 10.7 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |

3.21. Linear, Grubbing & Land Clearing (2025) - Unmitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.93 | 0.78 | 6.78 | 6.98 | 0.01 | 0.42 | | 0.42 | 0.39 | | 0.39 | | 981 | 981 | 0.04 | 0.01 | | 984 |
| Dust From Material Movement | | | | | | | | 0.41 | 0.41 | | 0.04 | 0.04 | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | | |
| Average Daily | | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.09 | 0.07 | 0.65 | 0.67 | < 0.005 | 0.04 | | 0.04 | 0.04 | | 0.04 | | 94 | 94 | < 0.005 | < 0.005 | | 94.4 |
| Dust From Material Movement | | | | | | | | 0.04 | 0.04 | | < 0.005 | < 0.005 | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.02 | 0.01 | 0.12 | 0.12 | < 0.005 | 0.01 | | 0.01 | 0.01 | | 0.01 | | 15.6 | 15.6 | < 0.005 | < 0.005 | | 15.6 |
| Dust From Material Movement | | | | | | | | 0.01 | 0.01 | | < 0.005 | < 0.005 | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | | |
| Worker | | 0.31 | 0.29 | 0.2 | 3.77 | 0 | 0 | 37.2 | 37.2 | 0 | 3.79 | 3.79 | | 673 | 673 | 0.03 | 0.02 | 2.6 | 684 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | | |
| Average Daily | | | | | | | | | | | | | | | | | | | |
| Worker | | 0.03 | 0.02 | 0.02 | 0.29 | 0 | 0 | 3.47 | 3.47 | 0 | 0.35 | 0.35 | | 59.3 | 59.3 | < 0.005 | < 0.005 | 0.11 | 60.2 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | | |
| Worker | < 0.005 | < 0.005 | < 0.005 | | 0.05 | 0 | 0 | 0.63 | 0.63 | 0 | 0.06 | 0.06 | | 9.82 | 9.82 | < 0.005 | < 0.005 | 0.02 | 9.96 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |

3.22. Linear, Grubbing & Land Clearing (2025) - Mitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.11 | 0.11 | 1.67 | 6.86 | 0.01 | 0.02 | | 0.02 | 0.02 | | 0.02 | | 981 | 981 | 0.04 | 0.01 | | 984 |
| Dust From Material Movement | | | | | | | | 0.41 | 0.41 | | 0.04 | 0.04 | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | | |
| Average Daily | | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.01 | 0.01 | 0.16 | 0.66 | < 0.005 | < 0.005 | | < 0.005 | < 0.005 | | < 0.005 | | 94 | 94 | < 0.005 | < 0.005 | | 94.4 |
| Dust From Material Movement | | | | | | | | 0.04 | 0.04 | | < 0.005 | < 0.005 | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | < 0.005 | < 0.005 | | 0.03 | 0.12 | < 0.005 | < 0.005 | | < 0.005 | < 0.005 | | < 0.005 | 15.6 | 15.6 | < 0.005 | < 0.005 | | 15.6 |
| Dust From Material Movement | | | | | | | | | 0.01 | 0.01 | | < 0.005 | < 0.005 | | | | | |
| Onsite truck | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Worker | 0.31 | 0.29 | 0.2 | 3.77 | 0 | 0 | 37.2 | 37.2 | 0 | 3.79 | 3.79 | | 673 | 673 | 0.03 | 0.02 | 2.6 | 684 |
| Vendor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Worker | 0.03 | 0.02 | 0.02 | 0.29 | 0 | 0 | 3.47 | 3.47 | 0 | 0.35 | 0.35 | | 59.3 | 59.3 | < 0.005 | < 0.005 | 0.11 | 60.2 |
| Vendor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.05 | 0 | 0 | 0.63 | 0.63 | 0 | 0.06 | 0.06 | | 9.82 | 9.82 | < 0.005 | < 0.005 | 0.02 | 9.96 |
| Vendor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |

3.23. Linear, Grading & Excavation (2025) - Unmitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 7.41 | 6.23 | 54.6 | 58.8 | 0.12 | 2.41 | | 2.41 | 2.22 | | 2.22 | 12991 | 12991 | 0.53 | 0.11 | | 13036 |
| Dust From Material Movement | | | | | | | | 2.48 | 2.48 | | 0.27 | 0.27 | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.71 | 0.6 | 5.23 | 5.64 | 0.01 | 0.23 | | 0.23 | 0.21 | | 0.21 | 1246 | 1246 | 0.05 | 0.01 | | 1250 |
| Dust From Material Movement | | | | | | | | 0.24 | 0.24 | | 0.03 | 0.03 | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.13 | 0.11 | 0.96 | 1.03 | < 0.005 | 0.04 | | 0.04 | 0.04 | | 0.04 | 206 | 206 | 0.01 | < 0.005 | | 207 |
| Dust From Material Movement | | | | | | | | 0.04 | 0.04 | | < 0.005 | < 0.005 | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.57 | 0.53 | 0.36 | 6.92 | 0 | 0 | 68.2 | 68.2 | 0 | 6.95 | 6.95 | | 1234 | 1234 | 0.06 | 0.04 | 4.77 | 1253 |
| Vendor | < 0.005 | < 0.005 | | 0.1 | 0.02 | < 0.005 | < 0.005 | | 0.77 | 0.77 | < 0.005 | 0.08 | 0.08 | | 63 | 63 | < 0.005 | 0.01 | 0.15 | 66 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Worker | | 0.05 | 0.05 | 0.04 | 0.53 | 0 | 0 | 6.36 | 6.36 | 0 | 0.65 | 0.65 | | 109 | 109 | < 0.005 | < 0.005 | 0.2 | 110 |
| Vendor | < 0.005 | < 0.005 | | 0.01 | < 0.005 | < 0.005 | < 0.005 | | 0.07 | 0.07 | < 0.005 | 0.01 | 0.01 | | 6.04 | 6.04 | < 0.005 | < 0.005 | 0.01 | 6.32 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Worker | | 0.01 | 0.01 | 0.01 | 0.1 | 0 | 0 | 1.16 | 1.16 | 0 | 0.12 | 0.12 | | 18 | 18 | < 0.005 | < 0.005 | 0.03 | 18.3 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | | 1 | 1 | < 0.005 | < 0.005 | < 0.005 | 1.05 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |

3.24. Linear, Grading & Excavation (2025) - Mitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 1.31 | 1.31 | 12.3 | 75.1 | 0.12 | 0.24 | | 0.24 | 0.24 | | 0.24 | 12991 | 12991 | 0.53 | 0.11 | | 13036 |
| Dust From Material Movement | | | | | | | | 2.48 | 2.48 | | 0.27 | 0.27 | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.13 | 0.13 | 1.18 | 7.2 | 0.01 | 0.02 | | 0.02 | 0.02 | | 0.02 | 1246 | 1246 | 0.05 | 0.01 | | 1250 |
| Dust From Material Movement | | | | | | | | 0.24 | 0.24 | | 0.03 | 0.03 | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.02 | 0.02 | 0.22 | 1.31 | < 0.005 | < 0.005 | | < 0.005 | < 0.005 | | < 0.005 | 206 | 206 | 0.01 | < 0.005 | | 207 |
| Dust From Material Movement | | | | | | | | 0.04 | 0.04 | | < 0.005 | < 0.005 | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.57 | 0.53 | 0.36 | 6.92 | 0 | 0 | 68.2 | 68.2 | 0 | 6.95 | 6.95 | | 1234 | 1234 | 0.06 | 0.04 | 4.77 | 1253 |

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | < 0.005 | < 0.005 | | 0.1 | 0.02 | < 0.005 | < 0.005 | | 0.77 | 0.77 | < 0.005 | 0.08 | 0.08 | 63 | 63 | < 0.005 | 0.01 | 0.15 | 66 | | |
| Hauling | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | | | | |
| Average Daily | | | | | | | | | | | | | | | | | | | | | |
| Worker | 0.05 | 0.05 | 0.04 | 0.53 | 0 | 0 | 6.36 | 6.36 | 0 | 0.65 | 0.65 | 109 | 109 | < 0.005 | < 0.005 | 0.2 | 110 | | | | |
| Vendor | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | 0.07 | 0.07 | < 0.005 | 0.01 | 0.01 | 6.04 | 6.04 | < 0.005 | < 0.005 | 0.01 | 6.32 | | | | |
| Hauling | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| Annual | | | | | | | | | | | | | | | | | | | | | |
| Worker | 0.01 | 0.01 | 0.01 | 0.1 | 0 | 0 | 1.16 | 1.16 | 0 | 0.12 | 0.12 | 18 | 18 | < 0.005 | < 0.005 | 0.03 | 18.3 | | | | |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | 1 | 1 | < 0.005 | < 0.005 | < 0.005 | 1.05 | | | | |
| Hauling | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |

3.25. Linear, Drainage, Utilities, & Sub-Grade (2025) - Unmitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 5.99 | 5.02 | 45.9 | 47.3 | 0.11 | 1.83 | | 1.83 | 1.68 | | 1.68 | 11387 | 11387 | 0.46 | 0.09 | | 11426 |
| Dust From Material Movement | | | | | | | | 2.07 | 2.07 | | 0.22 | 0.22 | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.57 | 0.48 | 4.4 | 4.53 | 0.01 | 0.18 | | 0.18 | 0.16 | | 0.16 | 1092 | 1092 | 0.04 | 0.01 | | 1096 |
| Dust From Material Movement | | | | | | | | 0.2 | 0.2 | | 0.02 | 0.02 | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.1 | 0.09 | 0.8 | 0.83 | < 0.005 | 0.03 | | 0.03 | 0.03 | | 0.03 | 181 | 181 | 0.01 | < 0.005 | | 181 |
| Dust From Material Movement | | | | | | | | 0.04 | 0.04 | | < 0.005 | < 0.005 | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.52 | 0.48 | 0.33 | 6.29 | 0 | 0 | 62 | 62 | 0 | 6.32 | 6.32 | 1122 | 1122 | 0.05 | 0.04 | 4.34 | 1139 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Worker | | 0.05 | 0.04 | 0.04 | 0.48 | 0 | 0 | 5.78 | 5.78 | 0 | 0.59 | 0.59 | 98.9 | 98.9 | < 0.005 | < 0.005 | 0.18 | 100 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Worker | | 0.01 | 0.01 | 0.01 | 0.09 | 0 | 0 | 1.05 | 1.05 | 0 | 0.11 | 0.11 | 16.4 | 16.4 | < 0.005 | < 0.005 | 0.03 | 16.6 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

3.26. Linear, Drainage, Utilities, & Sub-Grade (2025) - Mitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 1.58 | 1.49 | 10.3 | 63.2 | 0.11 | 0.34 | | 0.34 | 0.33 | | 0.33 | 11387 | 11387 | 0.46 | 0.09 | | 11426 |
| Dust From Material Movement | | | | | | | | 2.07 | 2.07 | | 0.22 | 0.22 | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.15 | 0.14 | 0.98 | 6.06 | 0.01 | 0.03 | | 0.03 | 0.03 | | 0.03 | 1092 | 1092 | 0.04 | 0.01 | | 1096 |
| Dust From Material Movement | | | | | | | | 0.2 | 0.2 | | 0.02 | 0.02 | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.03 | 0.03 | 0.18 | 1.11 | < 0.005 | 0.01 | | 0.01 | 0.01 | | 0.01 | 181 | 181 | 0.01 | < 0.005 | | 181 |
| Dust From Material Movement | | | | | | | | 0.04 | 0.04 | | < 0.005 | < 0.005 | | | | | | |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.52 | 0.48 | 0.33 | 6.29 | 0 | 0 | 62 | 62 | 0 | 6.32 | 6.32 | 1122 | 1122 | 0.05 | 0.04 | 4.34 | 1139 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Worker | | 0.05 | 0.04 | 0.04 | 0.48 | 0 | 0 | 5.78 | 5.78 | 0 | 0.59 | 0.59 | 98.9 | 98.9 | < 0.005 | < 0.005 | 0.18 | 100 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | |
| Worker | 0.01 | 0.01 | 0.01 | 0.09 | 0 | 0 | 1.05 | 1.05 | 0 | 0.11 | 0.11 | 16.4 | 16.4 | < 0.005 | < 0.005 | 0.03 | 16.6 |
| Vendor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

3.27. Linear, Paving (2025) - Unmitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 2.11 | 1.78 | 15.4 | 21.6 | 0.03 | 0.68 | | 0.68 | 0.62 | | 0.62 | 3240 | 3240 | 0.13 | 0.03 | | 3251 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 2.11 | 1.78 | 15.4 | 21.6 | 0.03 | 0.68 | | 0.68 | 0.62 | | 0.62 | 3240 | 3240 | 0.13 | 0.03 | | 3251 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.2 | 0.17 | 1.48 | 2.07 | < 0.005 | 0.07 | | 0.07 | 0.06 | | 0.06 | 311 | 311 | 0.01 | < 0.005 | | 312 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.04 | 0.03 | 0.27 | 0.38 | < 0.005 | 0.01 | | 0.01 | 0.01 | | 0.01 | 51.4 | 51.4 | < 0.005 | < 0.005 | | 51.6 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.44 | 0.41 | 0.28 | 5.35 | 0 | 0 | 52.7 | 52.7 | 0 | 5.37 | 5.37 | 953 | 953 | 0.04 | 0.03 | 3.69 | 968 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.4 | 0.36 | 0.38 | 4.21 | 0 | 0 | 52.7 | 52.7 | 0 | 5.37 | 5.37 | 858 | 858 | 0.02 | 0.03 | 0.1 | 869 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Worker | | 0.04 | 0.04 | 0.03 | 0.41 | 0 | 0 | 4.91 | 4.91 | 0 | 0.5 | 0.5 | 84.1 | 84.1 | < 0.005 | < 0.005 | 0.15 | 85.2 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Worker | | 0.01 | 0.01 | 0.01 | 0.08 | 0 | 0 | 0.9 | 0.9 | 0 | 0.09 | 0.09 | 13.9 | 13.9 | < 0.005 | < 0.005 | 0.03 | 14.1 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

3.28. Linear, Paving (2025) - Mitigated

| Location | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.36 | 0.36 | 5.16 | 22.7 | 0.03 | 0.06 | | 0.06 | 0.06 | | 0.06 | 3240 | 3240 | 0.13 | 0.03 | | 3251 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.36 | 0.36 | 5.16 | 22.7 | 0.03 | 0.06 | | 0.06 | 0.06 | | 0.06 | 3240 | 3240 | 0.13 | 0.03 | | 3251 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.03 | 0.03 | 0.49 | 2.17 | < 0.005 | 0.01 | | 0.01 | 0.01 | | 0.01 | 311 | 311 | 0.01 | < 0.005 | | 312 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |
| Off-Road Equipment | | 0.01 | 0.01 | 0.09 | 0.4 | < 0.005 | < 0.005 | | < 0.005 | < 0.005 | | < 0.005 | 51.4 | 51.4 | < 0.005 | < 0.005 | | 51.6 |
| Onsite truck | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offsite | | | | | | | | | | | | | | | | | | |
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.44 | 0.41 | 0.28 | 5.35 | 0 | 0 | 52.7 | 52.7 | 0 | 5.37 | 5.37 | 953 | 953 | 0.04 | 0.03 | 3.69 | 968 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Worker | | 0.4 | 0.36 | 0.38 | 4.21 | 0 | 0 | 52.7 | 52.7 | 0 | 5.37 | 5.37 | 858 | 858 | 0.02 | 0.03 | 0.1 | 869 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Worker | | 0.04 | 0.04 | 0.03 | 0.41 | 0 | 0 | 4.91 | 4.91 | 0 | 0.5 | 0.5 | 84.1 | 84.1 | < 0.005 | < 0.005 | 0.15 | 85.2 |
| Vendor | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.01 | 0.01 | 0.01 | 0.08 | 0 | 0 | 0.9 | 0.9 | 0 | 0.09 | 0.09 | | 13.9 | 13.9 | < 0.005 | < 0.005 | | 0.03 | 14.1 |
| Vendor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hauling | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

| Vegetation | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Annual | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

| Land Use | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Annual | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

| Species | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Avoided | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Sequestered | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Removed | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Avoided | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Sequestered | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Removed | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Annual | | | | | | | | | | | | | | | | | | |
| Avoided | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Sequestered | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Removed | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

| Vegetation | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Annual | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

| Land Use | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Annual | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

| Species | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Avoided | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Sequestered | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Removed | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Avoided | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Sequestered | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Removed | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| Annual | | | | | | | | | | | | | | | | | | |
| Avoided | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Sequestered | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Removed | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |

5. Activity Data

5.1. Construction Schedule

| Phase Name | Phase Type | Start Date | End Date | Days Per Week | Work Days per Phase | Phase Description |
|---|---|---|---|---|---|---|
| Site Preparation | Site Preparation | 4/1/2025 | 5/23/2025 | 5 | 39 | |
| Grading | Grading | 5/24/2025 | 10/14/2025 | 5 | 102 | |
| Building Construction | Building Construction | 10/15/2025 | 9/10/2029 | 5 | 1019 | |
| Paving | Paving | 9/11/2029 | 12/19/2029 | 5 | 72 | |
| Architectural Coating | Architectural Coating | 12/20/2029 | 3/29/2030 | 5 | 72 | |
| Linear, Grubbing & Land Clearing | Linear, Grubbing & Land Clearing | 4/1/2025 | 5/19/2025 | 5 | 35 | |
| Linear, Grading & Excavation | Linear, Grading & Excavation | 5/20/2025 | 7/7/2025 | 5 | 35 | |
| Linear, Drainage, Utilities, & Sub-Grad | Linear, Drainage, Utilities, & Sub-Grade | 7/8/2025 | 8/25/2025 | 5 | 35 | |
| Linear, Paving | Linear, Paving | 8/26/2025 | 10/13/2025 | 5 | 35 | |

5.2. Off-Road Equipment

5.2.1. Unmitigated

| Phase Name | Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|---|
| Site Preparation | Rubber Tired Dozers | Diesel | Average | 3 | 8 | 367 | 0.4 |
| Site Preparation | Tractors/Loaders/Backhoes | Diesel | Average | 4 | 8 | 84 | 0.37 |
| Grading | Graders | Diesel | Average | 1 | 8 | 148 | 0.41 |
| Grading | Excavators | Diesel | Average | 2 | 8 | 36 | 0.38 |
| Grading | Tractors/Loaders/Backhoes | Diesel | Average | 2 | 8 | 84 | 0.37 |
| Grading | Scrapers | Diesel | Average | 2 | 8 | 423 | 0.48 |
| Grading | Rubber Tired Dozers | Diesel | Average | 1 | 8 | 367 | 0.4 |
| Building Construction | Forklifts | Diesel | Average | 3 | 8 | 82 | 0.2 |
| Building Construction | Generator Sets | Diesel | Average | 1 | 8 | 14 | 0.74 |
| Building Construction | Cranes | Diesel | Average | 1 | 7 | 367 | 0.29 |
| Building Construction | Welders | Diesel | Average | 1 | 8 | 46 | 0.45 |
| Building Construction | Tractors/Loaders/Backhoes | Diesel | Average | 3 | 7 | 84 | 0.37 |
| Paving | Pavers | Diesel | Average | 2 | 8 | 81 | 0.42 |
| Paving | Paving Equipment | Diesel | Average | 2 | 8 | 89 | 0.36 |
| Paving | Rollers | Diesel | Average | 2 | 8 | 36 | 0.38 |
| Architectural Coating | Air Compressors | Diesel | Average | 1 | 6 | 37 | 0.48 |
| Linear, Grubbing & Land Clearing | Signal Boards | Electric | Average | 20 | 8 | 6 | 0.82 |
| Linear, Grubbing & Land Clearing | Crawler Tractors | Diesel | Average | 2 | 8 | 87 | 0.43 |
| Linear, Grubbing & Land Clearing | Excavators | Diesel | Average | 2 | 8 | 36 | 0.38 |
| Linear, Grading & Excavation | Excavators | Diesel | Average | 6 | 8 | 36 | 0.38 |
| Linear, Grading & Excavation | Crawler Tractors | Diesel | Average | 2 | 8 | 87 | 0.43 |
| Linear, Grading & Excavation | Graders | Diesel | Average | 2 | 8 | 148 | 0.41 |
| Linear, Grading & Excavation | Rollers | Diesel | Average | 4 | 8 | 36 | 0.38 |
| Linear, Grading & Excavation | Signal Boards | Electric | Average | 20 | 8 | 6 | 0.82 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Linear, Grading & Excavation | Tractors/Loaders/Backhoes | Diesel | Average | 4 | 8 | 84 | 0.37 |
| Linear, Grading & Excavation | Rubber Tired Loaders | Diesel | Average | 2 | 8 | 150 | 0.36 |
| Linear, Grading & Excavation | Scrapers | Diesel | Average | 4 | 8 | 423 | 0.48 |
| Linear, Drainage, Utilities, & Sub-Grad | Scrapers | Diesel | Average | 4 | 8 | 423 | 0.48 |
| Linear, Drainage, Utilities, & Sub-Grad | Rough Terrain Forklifts | Diesel | Average | 2 | 8 | 96 | 0.4 |
| Linear, Drainage, Utilities, & Sub-Grad | Signal Boards | Electric | Average | 20 | 8 | 6 | 0.82 |
| Linear, Drainage, Utilities, & Sub-Grad | Tractors/Loaders/Backhoes | Diesel | Average | 4 | 8 | 84 | 0.37 |
| Linear, Drainage, Utilities, & Sub-Grad | Graders | Diesel | Average | 2 | 8 | 148 | 0.41 |
| Linear, Drainage, Utilities, & Sub-Grad | Plate Compactors | Diesel | Average | 2 | 8 | 8 | 0.43 |
| Linear, Drainage, Utilities, & Sub-Grad | Pumps | Diesel | Average | 2 | 8 | 11 | 0.74 |
| Linear, Drainage, Utilities, & Sub-Grad | Air Compressors | Diesel | Average | 2 | 8 | 37 | 0.48 |
| Linear, Drainage, Utilities, & Sub-Grad | Generator Sets | Diesel | Average | 2 | 8 | 14 | 0.74 |
| Linear, Paving | Rollers | Diesel | Average | 6 | 8 | 36 | 0.38 |
| Linear, Paving | Paving Equipment | Diesel | Average | 2 | 8 | 89 | 0.36 |
| Linear, Paving | Pavers | Diesel | Average | 2 | 8 | 81 | 0.42 |
| Linear, Paving | Tractors/Loaders/Backhoes | Diesel | Average | 4 | 8 | 84 | 0.37 |
| Linear, Paving | Signal Boards | Electric | Average | 20 | 8 | 6 | 0.82 |

5.2.2. Mitigated

| Phase Name | Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|---|
| Site Preparation | Rubber Tired Dozers | Diesel | Tier 4 Final | 3 | 8 | 367 | 0.4 |
| Site Preparation | Tractors/Loaders/Backhoes | Diesel | Tier 4 Final | 4 | 8 | 84 | 0.37 |
| Grading | Graders | Diesel | Tier 4 Final | 1 | 8 | 148 | 0.41 |
| Grading | Excavators | Diesel | Tier 4 Final | 2 | 8 | 36 | 0.38 |
| Grading | Tractors/Loaders/Backhoes | Diesel | Tier 4 Final | 2 | 8 | 84 | 0.37 |
| Grading | Scrapers | Diesel | Tier 4 Final | 2 | 8 | 423 | 0.48 |
| Grading | Rubber Tired Dozers | Diesel | Tier 4 Final | 1 | 8 | 367 | 0.4 |
| Building Construction | Forklifts | Diesel | Tier 4 Final | 3 | 8 | 82 | 0.2 |
| Building Construction | Generator Sets | Diesel | Average | 1 | 8 | 14 | 0.74 |
| Building Construction | Cranes | Diesel | Tier 4 Final | 1 | 7 | 367 | 0.29 |
| Building Construction | Welders | Diesel | Tier 4 Final | 1 | 8 | 46 | 0.45 |
| Building Construction | Tractors/Loaders/Backhoes | Diesel | Tier 4 Final | 3 | 7 | 84 | 0.37 |
| Paving | Pavers | Diesel | Tier 4 Final | 2 | 8 | 81 | 0.42 |
| Paving | Paving Equipment | Diesel | Tier 4 Final | 2 | 8 | 89 | 0.36 |
| Paving | Rollers | Diesel | Tier 4 Final | 2 | 8 | 36 | 0.38 |
| Architectural Coating | Air Compressors | Diesel | Tier 4 Final | 1 | 6 | 37 | 0.48 |
| Linear, Grubbing & Land Clearing | Signal Boards | Electric | Average | 20 | 8 | 6 | 0.82 |
| Linear, Grubbing & Land Clearing | Crawler Tractors | Diesel | Tier 4 Final | 2 | 8 | 87 | 0.43 |
| Linear, Grubbing & Land Clearing | Excavators | Diesel | Tier 4 Final | 2 | 8 | 36 | 0.38 |
| Linear, Grading & Excavation | Excavators | Diesel | Tier 4 Final | 6 | 8 | 36 | 0.38 |
| Linear, Grading & Excavation | Crawler Tractors | Diesel | Tier 4 Final | 2 | 8 | 87 | 0.43 |
| Linear, Grading & Excavation | Graders | Diesel | Tier 4 Final | 2 | 8 | 148 | 0.41 |
| Linear, Grading & Excavation | Rollers | Diesel | Tier 4 Final | 4 | 8 | 36 | 0.38 |
| Linear, Grading & Excavation | Signal Boards | Electric | Average | 20 | 8 | 6 | 0.82 |
| Linear, Grading & Excavation | Tractors/Loaders/Backhoes | Diesel | Tier 4 Final | 4 | 8 | 84 | 0.37 |
| Linear, Grading & Excavation | Rubber Tired Loaders | Diesel | Tier 4 Final | 2 | 8 | 150 | 0.36 |
| Linear, Grading & Excavation | Scrapers | Diesel | Tier 4 Final | 4 | 8 | 423 | 0.48 |
| Linear, Drainage, Utilities, & Sub-Grad | Scrapers | Diesel | Tier 4 Final | 4 | 8 | 423 | 0.48 |
| Linear, Drainage, Utilities, & Sub-Grad | Rough Terrain Forklifts | Diesel | Tier 4 Final | 2 | 8 | 96 | 0.4 |
| Linear, Drainage, Utilities, & Sub-Grad | Signal Boards | Electric | Average | 20 | 8 | 6 | 0.82 |
| Linear, Drainage, Utilities, & Sub-Grad | Tractors/Loaders/Backhoes | Diesel | Tier 4 Final | 4 | 8 | 84 | 0.37 |
| Linear, Drainage, Utilities, & Sub-Grad | Graders | Diesel | Tier 4 Final | 2 | 8 | 148 | 0.41 |
| Linear, Drainage, Utilities, & Sub-Grad | Plate Compactors | Diesel | Average | 2 | 8 | 8 | 0.43 |
| Linear, Drainage, Utilities, & Sub-Grad | Pumps | Diesel | Average | 2 | 8 | 11 | 0.74 |
| Linear, Drainage, Utilities, & Sub-Grad | Air Compressors | Diesel | Tier 4 Final | 2 | 8 | 37 | 0.48 |
| Linear, Drainage, Utilities, & Sub-Grad | Generator Sets | Diesel | Average | 2 | 8 | 14 | 0.74 |
| Linear, Paving | Rollers | Diesel | Tier 4 Final | 6 | 8 | 36 | 0.38 |
| Linear, Paving | Paving Equipment | Diesel | Tier 4 Final | 2 | 8 | 89 | 0.36 |
| Linear, Paving | Pavers | Diesel | Tier 4 Final | 2 | 8 | 81 | 0.42 |
| Linear, Paving | Tractors/Loaders/Backhoes | Diesel | Tier 4 Final | 4 | 8 | 84 | 0.37 |
| Linear, Paving | Signal Boards | Electric | Average | 20 | 8 | 6 | 0.82 |

5.3. Construction Vehicles

5.3.1. Unmitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Site Preparation | | | | |
| Site Preparation | Worker | 17.5 | 14.3 | LDA,LDT1,LDT2 |
| Site Preparation | Vendor | | 8.8 | HHDT,MHDT |

| | | | | |
|---|---|---|---|---|
| Site Preparation | Hauling | 0 | 20 | HHDT |
| Site Preparation | Onsite truck | | | HHDT |
| Grading | | | | |
| Grading | Worker | 20 | 14.3 | LDA,LDT1,LDT2 |
| Grading | Vendor | | 8.8 | HHDT,MHDT |
| Grading | Hauling | 0 | 20 | HHDT |
| Grading | Onsite truck | | | HHDT |
| Building Construction | | | | |
| Building Construction | Worker | 197 | 14.3 | LDA,LDT1,LDT2 |
| Building Construction | Vendor | 64.1 | 8.8 | HHDT,MHDT |
| Building Construction | Hauling | 0 | 20 | HHDT |
| Building Construction | Onsite truck | | | HHDT |
| Paving | | | | |
| Paving | Worker | 15 | 14.3 | LDA,LDT1,LDT2 |
| Paving | Vendor | | 8.8 | HHDT,MHDT |
| Paving | Hauling | 0 | 20 | HHDT |
| Paving | Onsite truck | | | HHDT |
| Architectural Coating | | | | |
| Architectural Coating | Worker | 39.4 | 14.3 | LDA,LDT1,LDT2 |
| Architectural Coating | Vendor | | 8.8 | HHDT,MHDT |
| Architectural Coating | Hauling | 0 | 20 | HHDT |
| Architectural Coating | Onsite truck | | | HHDT |
| Linear, Grubbing & Land Clearing | | | | |
| Linear, Grubbing & Land Clearing | Worker | 60 | 14.3 | LDA,LDT1,LDT2 |
| Linear, Grubbing & Land Clearing | Vendor | 0 | 8.8 | HHDT,MHDT |
| Linear, Grubbing & Land Clearing | Hauling | 0 | 20 | HHDT |
| Linear, Grubbing & Land Clearing | Onsite truck | | | HHDT |
| Linear, Grading & Excavation | | | | |
| Linear, Grading & Excavation | Worker | 110 | 14.3 | LDA,LDT1,LDT2 |
| Linear, Grading & Excavation | Vendor | 2 | 8.8 | HHDT,MHDT |
| Linear, Grading & Excavation | Hauling | 0 | 20 | HHDT |
| Linear, Grading & Excavation | Onsite truck | | | HHDT |
| Linear, Drainage, Utilities, & Sub-Grade | | | | |
| Linear, Drainage, Utilities, & Sub-Grad | Worker | 100 | 14.3 | LDA,LDT1,LDT2 |
| Linear, Drainage, Utilities, & Sub-Grad | Vendor | 0 | 8.8 | HHDT,MHDT |
| Linear, Drainage, Utilities, & Sub-Grad | Hauling | 0 | 20 | HHDT |
| Linear, Drainage, Utilities, & Sub-Grad | Onsite truck | | | HHDT |
| Linear, Paving | | | | |
| Linear, Paving | Worker | 85 | 14.3 | LDA,LDT1,LDT2 |
| Linear, Paving | Vendor | 0 | 8.8 | HHDT,MHDT |
| Linear, Paving | Hauling | 0 | 20 | HHDT |
| Linear, Paving | Onsite truck | | | HHDT |

5.3.2. Mitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Site Preparation | | | | |
| Site Preparation | Worker | 17.5 | 14.3 | LDA,LDT1,LDT2 |
| Site Preparation | Vendor | | 8.8 | HHDT,MHDT |
| Site Preparation | Hauling | 0 | 20 | HHDT |
| Site Preparation | Onsite truck | | | HHDT |
| Grading | | | | |
| Grading | Worker | 20 | 14.3 | LDA,LDT1,LDT2 |
| Grading | Vendor | | 8.8 | HHDT,MHDT |
| Grading | Hauling | 0 | 20 | HHDT |
| Grading | Onsite truck | | | HHDT |
| Building Construction | | | | |
| Building Construction | Worker | 197 | 14.3 | LDA,LDT1,LDT2 |
| Building Construction | Vendor | 64.1 | 8.8 | HHDT,MHDT |
| Building Construction | Hauling | 0 | 20 | HHDT |
| Building Construction | Onsite truck | | | HHDT |
| Paving | | | | |
| Paving | Worker | 15 | 14.3 | LDA,LDT1,LDT2 |
| Paving | Vendor | | 8.8 | HHDT,MHDT |
| Paving | Hauling | 0 | 20 | HHDT |
| Paving | Onsite truck | | | HHDT |
| Architectural Coating | | | | |
| Architectural Coating | Worker | 39.4 | 14.3 | LDA,LDT1,LDT2 |
| Architectural Coating | Vendor | | 8.8 | HHDT,MHDT |

| | | | | | |
|---|---|---|---|---|---|
| Architectural Coating | Hauling | 0 | 20 | HHDT | |
| Architectural Coating | Onsite truck | | | HHDT | |
| Linear, Grubbing & Land Clearing | | | | | |
| Linear, Grubbing & Land Clearing | Worker | 60 | 14.3 | LDA,LDT1,LDT2 | |
| Linear, Grubbing & Land Clearing | Vendor | 0 | 8.8 | HHDT,MHDT | |
| Linear, Grubbing & Land Clearing | Hauling | 0 | 20 | HHDT | |
| Linear, Grubbing & Land Clearing | Onsite truck | | | HHDT | |
| Linear, Grading & Excavation | | | | | |
| Linear, Grading & Excavation | Worker | 110 | 14.3 | LDA,LDT1,LDT2 | |
| Linear, Grading & Excavation | Vendor | 2 | 8.8 | HHDT,MHDT | |
| Linear, Grading & Excavation | Hauling | 0 | 20 | HHDT | |
| Linear, Grading & Excavation | Onsite truck | | | HHDT | |
| Linear, Drainage, Utilities, & Sub-Grade | | | | | |
| Linear, Drainage, Utilities, & Sub-Grad | Worker | 100 | 14.3 | LDA,LDT1,LDT2 | |
| Linear, Drainage, Utilities, & Sub-Grad | Vendor | 0 | 8.8 | HHDT,MHDT | |
| Linear, Drainage, Utilities, & Sub-Grad | Hauling | 0 | 20 | HHDT | |
| Linear, Drainage, Utilities, & Sub-Grad | Onsite truck | | | HHDT | |
| Linear, Paving | | | | | |
| Linear, Paving | Worker | 85 | 14.3 | LDA,LDT1,LDT2 | |
| Linear, Paving | Vendor | 0 | 8.8 | HHDT,MHDT | |
| Linear, Paving | Hauling | 0 | 20 | HHDT | |
| Linear, Paving | Onsite truck | | | HHDT | |

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

| Control Strategies Applied | PM10 Reduction | PM2.5 Reduction |
|---|---|---|

5.5. Architectural Coatings

| Phase Name | Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|---|
| Architectural Coating | 1496576 | 498859 | 215622 | 71874 | |

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

| Phase Name | Material Imported (cy) | Material Exported (cy) | Acres Graded (acres) | Material Demolished (sq. f | Acres Paved (acres) | |
|---|---|---|---|---|---|---|
| Site Preparation | | | 58.5 | 0 | | |
| Grading | | | 306 | 0 | | |
| Paving | 0 | 0 | 0 | 0 | | 69.8 |
| Linear, Grubbing & Land Clearing | | | 65.7 | 0 | | |
| Linear, Grading & Excavation | | | 65.7 | 0 | | |
| Linear, Drainage, Utilities, & Sub-Grade | | | 65.7 | 0 | | |

5.6.2. Construction Earthmoving Control Strategies

| Control Strategies Applied | Frequency (per day) | PM10 Reduction | PM2.5 Reduction |
|---|---|---|---|
| Water Exposed Area | 2 | 61 | 61 |

5.7. Construction Paving

| Land Use | Area Paved (acres) | % Asphalt |
|---|---|---|
| Single Family Housing | 0.2 | 0 |
| Single Family Housing | 3.98 | 0 |
| Health Club | 0 | 0 |
| City Park | 0 | 0 |
| City Park | 0 | 0 |
| City Park | 0 | 0 |
| Road Construction | 31.5 | 100 |
| Road Construction | 34.2 | 100 |

5.8. Construction Electricity Consumption and Emissions Factors

| Year | kWh per Year | CO2 | CH4 | N2O |
|---|---|---|---|---|
| 2025 | 2348 | 204 | 0.03 | < 0.005 |
| 2026 | 0 | 204 | 0.03 | < 0.005 |
| 2027 | 0 | 204 | 0.03 | < 0.005 |
| 2028 | 0 | 204 | 0.03 | < 0.005 |
| 2029 | 0 | 204 | 0.03 | < 0.005 |
| 2030 | 0 | 204 | 0.03 | < 0.005 |

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
|---|---|---|---|

5.18.1.2. Mitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
|---|---|---|---|

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

| Biomass Cover Type | Initial Acres | Final Acres |
|---|---|---|

5.18.1.2. Mitigated

| Biomass Cover Type | Initial Acres | Final Acres |
|---|---|---|

5.18.2. Sequestration

5.18.2.1. Unmitigated

| Tree Type | Number | Electricity Saved (kWh/year) | Natural Gas Saved (btu/year) |
|---|---|---|---|

5.18.2.2. Mitigated

| Tree Type | Number | Electricity Saved (kWh/year) | Natural Gas Saved (btu/year) |
|---|---|---|---|

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

| Climate Hazard | Result for Project Location | Unit |
|---|---|---|
| Temperature and Extreme Heat | 31.2 | annual days of extreme |
| Extreme Precipitation | 9.95 | annual days with precipitation above 20 mm |
| Sea Level Rise | | meters of inundation |
| Wildfire | 16.6 | annual hectares burned |

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

| Climate Hazard | Exposure Score | Sensitivity Score | Adaptive Capacity Score | Vulnerability Score |
|---|---|---|---|---|
| Temperature and Extreme Heat | N/A | N/A | N/A | N/A |
| Extreme Precipitation | 2 | 0 | 0 | N/A |
| Sea Level Rise | N/A | N/A | N/A | N/A |
| Wildfire | 1 | 0 | 0 | N/A |
| Flooding | N/A | N/A | N/A | N/A |
| Drought | N/A | N/A | N/A | N/A |
| Snowpack Reduction | 0 | 0 | 0 | N/A |
| Air Quality Degradation | N/A | N/A | N/A | N/A |

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

| Climate Hazard | Exposure Score | Sensitivity Score | Adaptive Capacity Score | Vulnerability Score | |
|---|---|---|---|---|---|
| Temperature and Extreme Heat | N/A | N/A | N/A | N/A | |
| Extreme Precipitation | 2 | 1 | 1 | | 3 |
| Sea Level Rise | N/A | N/A | N/A | N/A | |
| Wildfire | 1 | 1 | 1 | | 2 |
| Flooding | N/A | N/A | N/A | N/A | |
| Drought | N/A | N/A | N/A | N/A | |
| Snowpack Reduction | 1 | 1 | 1 | | 2 |
| Air Quality Degradation | N/A | N/A | N/A | N/A | |

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

| Indicator | Result for Project Census Tract |
|---|---|
| Exposure Indicators | |
| AQ-Ozone | 75.1 |
| AQ-PM | 14.1 |
| AQ-DPM | 12.2 |
| Drinking Water | 15.7 |
| Lead Risk Housing | 1.95 |
| Pesticides | 27.4 |
| Toxic Releases | 13.2 |
| Traffic | 15.6 |
| Effect Indicators | |
| CleanUp Sites | 50.3 |
| Groundwater | 0 |
| Haz Waste Facilities/Generators | 19.2 |
| Impaired Water Bodies | 12.5 |
| Solid Waste | 2.52 |
| Sensitive Population | |
| Asthma | 7.33 |
| Cardio-vascular | 25.7 |
| Low Birth Weights | 0.23 |
| Socioeconomic Factor Indicators | |
| Education | 2.3 |
| Housing | 2.43 |
| Linguistic | 0.92 |
| Poverty | 3.54 |
| Unemployment | 26.9 |

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

| Indicator | Result for Project Census Tract |
|---|---|
| Economic | |
| Above Poverty | 99.08892596 |
| Employed | 79.81521879 |
| Median HI | 93.40433723 |
| Education | |
| Bachelor's or higher | 84.10111639 |
| High school enrollment | 100 |
| Preschool enrollment | 21.10868728 |
| Transportation | |
| Auto Access | 90.86359553 |
| Active commuting | 57.71846529 |
| Social | |
| 2-parent households | 98.53714872 |
| Voting | 94.81586039 |
| Neighborhood | |
| Alcohol availability | 88.14320544 |
| Park access | 39.61247273 |
| Retail density | 15.95021173 |
| Supermarket access | 26.3826511 |
| Tree canopy | 94.66187604 |
| Housing | |
| Homeownership | 99.28140639 |
| Housing habitability | 99.97433594 |
| Low-inc homeowner severe housing c | 94.52072373 |
| Low-inc renter severe housing cost bu | 99.08892596 |
| Uncrowded housing | 96.93314513 |
| Health Outcomes | |
| Insured adults | 97.11279353 |
| Arthritis | 0 |
| Asthma ER Admissions | 91 |
| High Blood Pressure | 0 |

| | |
|---|---|
| Cancer (excluding skin) | 0 |
| Asthma | 0 |
| Coronary Heart Disease | 0 |
| Chronic Obstructive Pulmonary Disea | 0 |
| Diagnosed Diabetes | 0 |
| Life Expectancy at Birth | 75 |
| Cognitively Disabled | 98 |
| Physically  Disabled | 99 |
| Heart Attack ER Admissions | 77 |
| Mental Health Not Good | 0 |
| Chronic Kidney Disease | 0 |
| Obesity | 0 |
| Pedestrian Injuries | 20 |
| Physical Health Not Good | 0 |
| Stroke | 0 |
| Health Risk Behaviors | |
| Binge Drinking | 0 |
| Current Smoker | 0 |
| No Leisure Time for Physical Activity | 0 |
| Climate Change Exposures | |
| Wildfire Risk | 0 |
| SLR Inundation Area | 0 |
| Children | 55 |
| Elderly | 47 |
| English Speaking | 73 |
| Foreign-born | 6.2 |
| Outdoor Workers | 66 |
| Climate Change Adaptive Capacity | |
| Impervious Surface Cover | 91 |
| Traffic Density | 18 |
| Traffic Access | 0 |
| Other Indices | |
| Hardship | 7.2 |
| Other Decision Support | |
| 2016 Voting | 98 |

7.3. Overall Health & Equity Scores

| Metric | Result for Project Census Tract |
|---|---|
| CalEnviroScreen 4.0 Score for Project | 0 |
| Healthy Places Index Score for Project | 95 |
| Project Located in a Designated Disad | No |
| Project Located in a Low-Income Com | No |
| Project Located in a Community Air Pr | No |

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

| Measure Title | Co-Benefits Achieved |
|---|---|

7.5. Evaluation Scorecard

| Category | Number of Applicable Measures | Total Points Earned by App | Max Possible Points | Weighted Score |
|---|---|---|---|---|

7.6. Health & Equity Custom Measures

| Measure Title | Sponsor |
|---|---|

8. User Changes to Default Data

| Screen | Justification |
|---|---|
| Land Use | PD |
| Construction: Construction Phases | 5 year buildout starting in April 2025 |
| Construction: Architectural Coatings | El dorado VOC limit: 100 g/L for flat, 50 for nonflat |

# Green Valley Detailed Report

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# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | Green Valley |
| Construction Start Date | 4/1/2025 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 2.30 |
| Precipitation (days) | 10.4 |
| Location | 38.70432290409059, -121.04617842490336 |
| County | El Dorado-Mountain County |
| City | Unincorporated |
| Air District | El Dorado County AQMD |
| Air Basin | Mountain Counties |
| TAZ | 400 |
| EDFZ | 4 |
| Electric Utility | Pacific Gas & Electric Company |
| Gas Utility | Pacific Gas & Electric |
| App Version | 2022.1.1.21 |

## 1.2. Land Use Types

| Land Use Subtype | Size | Unit | Lot Acreage | Building Area (sq ft) | Landscape Area (sq ft) | Special Landscape Area (sq ft) | Population | Description |
|---|---|---|---|---|---|---|---|---|
| Single Family Housing | 18.0 | Dwelling Unit | 5.00 | 35,100 | 210,831 | — | 46.0 | Low Density Residential |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Single Family Housing | 361 | Dwelling Unit | 171 | 703,950 | 4,228,341 | — | 917 | High Density Residential |
| Health Club | 144 | 1000sqft | 3.30 | 143,748 | — | — | — | Clubhouse |
| City Park | 4.00 | Acre | 4.00 | 0.00 | — | — | — | Public Facilities (Lot A) |
| City Park | 57.6 | Acre | 57.6 | 0.00 | — | — | — | Open Space |
| City Park | 8.00 | Acre | 8.00 | 0.00 | — | — | — | Landscape Lots L1-L13, Open Spaces C-K |
| Road Construction | 3.00 | Mile | 31.5 | 0.00 | 0.00 | — | — | road construction |
| Road Construction | 7.30 | Mile | 34.2 | 0.00 | 0.00 | — | — | Offsite improvements |

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

| Sector | # | Measure Title |
|---|---|---|
| Construction | C-5 | Use Advanced Engine Tiers |

## 2. Emissions Summary

### 2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Un/Mit. | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 12.0 | 10.2 | 86.7 | 97.0 | 0.18 | 3.78 | 147 | 147 | 3.48 | 15.0 | 15.8 | — | 21,113 | 21,113 | 0.86 | 0.41 | 12.3 | 21,206 |
| Mit. | 2.84 | 2.70 | 17.3 | 119 | 0.18 | 0.47 | 147 | 147 | 0.46 | 15.0 | 15.1 | — | 21,113 | 21,113 | 0.86 | 0.41 | 12.3 | 21,206 |
| % Reduced | 76% | 73% | 80% | -22% | — | 88% | — | < 0.5% | 87% | — | 5% | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 6.42 | 129 | 45.6 | 55.1 | 0.09 | 1.91 | 147 | 147 | 1.76 | 15.0 | 15.4 | — | 10,900 | 10,900 | 0.43 | 0.41 | 0.35 | 10,947 |
| Mit. | 1.49 | 129 | 10.0 | 63.2 | 0.09 | 0.18 | 147 | 147 | 0.18 | 15.0 | 15.1 | — | 10,900 | 10,900 | 0.43 | 0.41 | 0.35 | 10,947 |
| % Reduced | 77% | < 0.5% | 78% | -15% | — | 90% | — | < 0.5% | 90% | — | 2% | — | — | — | — | — | — | — |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 3.62 | 22.2 | 25.8 | 29.7 | 0.05 | 1.07 | 102 | 102 | 0.99 | 10.4 | 10.7 | — | 6,571 | 6,571 | 0.24 | 0.29 | 3.78 | 6,615 |
| Mit. | 0.96 | 22.2 | 5.55 | 35.0 | 0.05 | 0.12 | 102 | 102 | 0.12 | 10.4 | 10.5 | — | 6,571 | 6,571 | 0.24 | 0.29 | 3.78 | 6,615 |
| % Reduced | 74% | < 0.5% | 78% | -18% | — | 88% | — | < 0.5% | 88% | — | 2% | — | — | — | — | — | — | — |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.66 | 4.05 | 4.71 | 5.43 | 0.01 | 0.20 | 18.6 | 18.7 | 0.18 | 1.90 | 1.94 | — | 1,088 | 1,088 | 0.04 | 0.05 | 0.63 | 1,095 |
| Mit. | 0.17 | 4.05 | 1.01 | 6.38 | 0.01 | 0.02 | 18.6 | 18.6 | 0.02 | 1.90 | 1.91 | — | 1,088 | 1,088 | 0.04 | 0.05 | 0.63 | 1,095 |
| % Reduced | 74% | < 0.5% | 78% | -18% | — | 88% | — | < 0.5% | 88% | — | 2% | — | — | — | — | — | — | — |

## 2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Year | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily - Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 12.0 | 10.2 | 86.7 | 97.0 | 0.18 | 3.78 | 90.0 | 93.8 | 3.48 | 12.3 | 15.8 | — | 21,113 | 21,113 | 0.86 | 0.22 | 5.79 | 21,206 |
| 2026 | 2.32 | 2.03 | 13.3 | 25.1 | 0.04 | 0.39 | 147 | 147 | 0.36 | 15.0 | 15.3 | — | 6,551 | 6,551 | 0.13 | 0.41 | 12.3 | 6,688 |
| 2027 | 2.23 | 1.94 | 12.7 | 24.3 | 0.04 | 0.35 | 147 | 147 | 0.32 | 15.0 | 15.3 | — | 6,478 | 6,478 | 0.13 | 0.39 | 11.2 | 6,608 |
| 2028 | 2.09 | 1.86 | 12.0 | 23.6 | 0.04 | 0.31 | 147 | 147 | 0.29 | 15.0 | 15.3 | — | 6,391 | 6,391 | 0.13 | 0.39 | 10.1 | 6,520 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2029 | 2.03 | 3.12 | 11.4 | 22.9 | 0.04 | 0.29 | 147 | 147 | 0.27 | 15.0 | 15.2 | — | 6,301 | 6,301 | 0.13 | 0.38 | 9.09 | 6,426 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 6.42 | 5.42 | 45.6 | 55.1 | 0.09 | 1.91 | 147 | 147 | 1.76 | 15.0 | 15.4 | — | 10,900 | 10,900 | 0.43 | 0.41 | 0.35 | 10,947 |
| 2026 | 2.24 | 1.94 | 13.7 | 22.6 | 0.04 | 0.39 | 147 | 147 | 0.36 | 15.0 | 15.3 | — | 6,335 | 6,335 | 0.15 | 0.41 | 0.32 | 6,460 |
| 2027 | 2.10 | 1.85 | 13.0 | 22.0 | 0.04 | 0.35 | 147 | 147 | 0.32 | 15.0 | 15.3 | — | 6,265 | 6,265 | 0.15 | 0.39 | 0.29 | 6,387 |
| 2028 | 2.02 | 1.73 | 12.3 | 21.4 | 0.04 | 0.31 | 147 | 147 | 0.29 | 15.0 | 15.3 | — | 6,183 | 6,183 | 0.14 | 0.39 | 0.26 | 6,304 |
| 2029 | 1.96 | 129 | 11.7 | 20.8 | 0.04 | 0.29 | 147 | 147 | 0.27 | 15.0 | 15.2 | — | 6,097 | 6,097 | 0.14 | 0.38 | 0.24 | 6,214 |
| 2030 | 0.26 | 129 | 0.89 | 2.51 | < 0.005 | 0.01 | 24.4 | 24.4 | 0.01 | 2.49 | 2.50 | — | 497 | 497 | 0.01 | 0.02 | 0.03 | 503 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 3.62 | 3.06 | 25.8 | 29.7 | 0.05 | 1.07 | 49.1 | 50.2 | 0.99 | 5.65 | 6.64 | — | 6,571 | 6,571 | 0.24 | 0.12 | 1.66 | 6,615 |
| 2026 | 1.60 | 1.39 | 9.70 | 16.2 | 0.03 | 0.28 | 102 | 102 | 0.26 | 10.4 | 10.7 | — | 4,555 | 4,555 | 0.10 | 0.29 | 3.78 | 4,648 |
| 2027 | 1.50 | 1.33 | 9.19 | 15.8 | 0.03 | 0.25 | 102 | 102 | 0.23 | 10.4 | 10.6 | — | 4,505 | 4,505 | 0.10 | 0.28 | 3.44 | 4,595 |
| 2028 | 1.45 | 1.28 | 8.71 | 15.5 | 0.03 | 0.22 | 102 | 102 | 0.21 | 10.4 | 10.6 | — | 4,457 | 4,457 | 0.10 | 0.28 | 3.13 | 4,547 |
| 2029 | 1.15 | 4.47 | 7.08 | 12.5 | 0.02 | 0.19 | 72.9 | 73.1 | 0.18 | 7.45 | 7.62 | — | 3,377 | 3,377 | 0.08 | 0.19 | 1.99 | 3,437 |
| 2030 | 0.05 | 22.2 | 0.15 | 0.44 | < 0.005 | < 0.005 | 4.09 | 4.09 | < 0.005 | 0.42 | 0.42 | — | 87.0 | 87.0 | < 0.005 | < 0.005 | 0.08 | 88.0 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.66 | 0.56 | 4.71 | 5.43 | 0.01 | 0.20 | 8.97 | 9.16 | 0.18 | 1.03 | 1.21 | — | 1,088 | 1,088 | 0.04 | 0.02 | 0.28 | 1,095 |
| 2026 | 0.29 | 0.25 | 1.77 | 2.96 | < 0.005 | 0.05 | 18.6 | 18.6 | 0.05 | 1.90 | 1.94 | — | 754 | 754 | 0.02 | 0.05 | 0.63 | 769 |
| 2027 | 0.27 | 0.24 | 1.68 | 2.88 | < 0.005 | 0.05 | 18.6 | 18.6 | 0.04 | 1.90 | 1.94 | — | 746 | 746 | 0.02 | 0.05 | 0.57 | 761 |
| 2028 | 0.26 | 0.23 | 1.59 | 2.82 | < 0.005 | 0.04 | 18.6 | 18.7 | 0.04 | 1.90 | 1.94 | — | 738 | 738 | 0.02 | 0.05 | 0.52 | 753 |
| 2029 | 0.21 | 0.82 | 1.29 | 2.28 | < 0.005 | 0.03 | 13.3 | 13.3 | 0.03 | 1.36 | 1.39 | — | 559 | 559 | 0.01 | 0.03 | 0.33 | 569 |
| 2030 | 0.01 | 4.05 | 0.03 | 0.08 | < 0.005 | < 0.005 | 0.75 | 0.75 | < 0.005 | 0.08 | 0.08 | — | 14.4 | 14.4 | < 0.005 | < 0.005 | 0.01 | 14.6 |

## 2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Year | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily - Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 2.84 | 2.70 | 17.3 | 119 | 0.18 | 0.47 | 90.0 | 90.3 | 0.46 | 12.3 | 12.7 | — | 21,113 | 21,113 | 0.86 | 0.22 | 5.79 | 21,206 |
| 2026 | 1.39 | 1.28 | 6.27 | 26.9 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15.0 | 15.1 | — | 6,551 | 6,551 | 0.13 | 0.41 | 12.3 | 6,688 |
| 2027 | 1.35 | 1.24 | 6.10 | 26.2 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15.0 | 15.1 | — | 6,478 | 6,478 | 0.13 | 0.39 | 11.2 | 6,608 |
| 2028 | 1.25 | 1.20 | 5.87 | 25.5 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15.0 | 15.1 | — | 6,391 | 6,391 | 0.13 | 0.39 | 10.1 | 6,520 |
| 2029 | 1.22 | 2.61 | 5.64 | 24.9 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15.0 | 15.1 | — | 6,301 | 6,301 | 0.13 | 0.38 | 9.09 | 6,426 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 1.49 | 1.45 | 10.0 | 63.2 | 0.09 | 0.18 | 147 | 147 | 0.18 | 15.0 | 15.1 | — | 10,900 | 10,900 | 0.43 | 0.41 | 0.35 | 10,947 |
| 2026 | 1.31 | 1.20 | 6.66 | 24.4 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15.0 | 15.1 | — | 6,335 | 6,335 | 0.15 | 0.41 | 0.32 | 6,460 |
| 2027 | 1.22 | 1.15 | 6.41 | 23.8 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15.0 | 15.1 | — | 6,265 | 6,265 | 0.15 | 0.39 | 0.29 | 6,387 |
| 2028 | 1.18 | 1.06 | 6.17 | 23.3 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15.0 | 15.1 | — | 6,183 | 6,183 | 0.14 | 0.39 | 0.26 | 6,304 |
| 2029 | 1.16 | 129 | 5.93 | 22.8 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15.0 | 15.1 | — | 6,097 | 6,097 | 0.14 | 0.38 | 0.24 | 6,214 |
| 2030 | 0.16 | 129 | 0.75 | 2.36 | < 0.005 | < 0.005 | 24.4 | 24.4 | < 0.005 | 2.49 | 2.49 | — | 497 | 497 | 0.01 | 0.02 | 0.03 | 503 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.96 | 0.91 | 5.55 | 35.0 | 0.05 | 0.12 | 49.1 | 49.3 | 0.12 | 5.65 | 5.77 | — | 6,571 | 6,571 | 0.24 | 0.12 | 1.66 | 6,615 |
| 2026 | 0.94 | 0.86 | 4.67 | 17.6 | 0.03 | 0.06 | 102 | 102 | 0.06 | 10.4 | 10.5 | — | 4,555 | 4,555 | 0.10 | 0.29 | 3.78 | 4,648 |
| 2027 | 0.87 | 0.83 | 4.50 | 17.1 | 0.03 | 0.06 | 102 | 102 | 0.06 | 10.4 | 10.5 | — | 4,505 | 4,505 | 0.10 | 0.28 | 3.44 | 4,595 |
| 2028 | 0.85 | 0.81 | 4.34 | 16.8 | 0.03 | 0.06 | 102 | 102 | 0.06 | 10.4 | 10.5 | — | 4,457 | 4,457 | 0.10 | 0.28 | 3.13 | 4,547 |
| 2029 | 0.62 | 4.05 | 3.32 | 13.6 | 0.02 | 0.05 | 72.9 | 72.9 | 0.05 | 7.45 | 7.49 | — | 3,377 | 3,377 | 0.08 | 0.19 | 1.99 | 3,437 |
| 2030 | 0.03 | 22.2 | 0.13 | 0.41 | < 0.005 | < 0.005 | 4.09 | 4.09 | < 0.005 | 0.42 | 0.42 | — | 87.0 | 87.0 | < 0.005 | < 0.005 | 0.08 | 88.0 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.17 | 0.17 | 1.01 | 6.38 | 0.01 | 0.02 | 8.97 | 8.99 | 0.02 | 1.03 | 1.05 | — | 1,088 | 1,088 | 0.04 | 0.02 | 0.28 | 1,095 |
| 2026 | 0.17 | 0.16 | 0.85 | 3.20 | < 0.005 | 0.01 | 18.6 | 18.6 | 0.01 | 1.90 | 1.91 | — | 754 | 754 | 0.02 | 0.05 | 0.63 | 769 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2027 | 0.16 | 0.15 | 0.82 | 3.13 | < 0.005 | 0.01 | 18.6 | 18.6 | 0.01 | 1.90 | 1.91 | — | 746 | 746 | 0.02 | 0.05 | 0.57 | 761 |
| 2028 | 0.16 | 0.15 | 0.79 | 3.07 | < 0.005 | 0.01 | 18.6 | 18.6 | 0.01 | 1.90 | 1.91 | — | 738 | 738 | 0.02 | 0.05 | 0.52 | 753 |
| 2029 | 0.11 | 0.74 | 0.61 | 2.48 | < 0.005 | 0.01 | 13.3 | 13.3 | 0.01 | 1.36 | 1.37 | — | 559 | 559 | 0.01 | 0.03 | 0.33 | 569 |
| 2030 | 0.01 | 4.05 | 0.02 | 0.08 | < 0.005 | < 0.005 | 0.75 | 0.75 | < 0.005 | 0.08 | 0.08 | — | 14.4 | 14.4 | < 0.005 | < 0.005 | 0.01 | 14.6 |

# 3. Construction Emissions Details

## 3.1. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 3.94 | 3.31 | 31.6 | 30.2 | 0.05 | 1.37 | — | 1.37 | 1.26 | — | 1.26 | — | 5,295 | 5,295 | 0.21 | 0.04 | — | 5,314 |
| Dust From Material Movement | — | — | — | — | — | — | 7.67 | 7.67 | — | 3.94 | 3.94 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.42 | 0.35 | 3.38 | 3.22 | 0.01 | 0.15 | — | 0.15 | 0.13 | — | 0.13 | — | 566 | 566 | 0.02 | < 0.005 | — | 568 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | 0.82 | 0.82 | — | 0.42 | 0.42 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.08 | 0.06 | 0.62 | 0.59 | < 0.005 | 0.03 | — | 0.03 | 0.02 | — | 0.02 | — | 93.7 | 93.7 | < 0.005 | < 0.005 | — | 94.0 |
| Dust From Material Movement | — | — | — | — | — | — | 0.15 | 0.15 | — | 0.08 | 0.08 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.09 | 0.08 | 0.06 | 1.10 | 0.00 | 0.00 | 10.9 | 10.9 | 0.00 | 1.11 | 1.11 | — | 196 | 196 | 0.01 | 0.01 | 0.76 | 199 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.09 | 0.00 | 0.00 | 1.13 | 1.13 | 0.00 | 0.11 | 0.11 | — | 19.3 | 19.3 | < 0.005 | < 0.005 | 0.03 | 19.6 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.02 | 0.00 | 0.00 | 0.21 | 0.21 | 0.00 | 0.02 | 0.02 | — | 3.19 | 3.19 | < 0.005 | < 0.005 | 0.01 | 3.24 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.2. Site Preparation (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.50 | 0.50 | 2.59 | 28.3 | 0.05 | 0.10 | — | 0.10 | 0.10 | — | 0.10 | — | 5,295 | 5,295 | 0.21 | 0.04 | — | 5,314 |
| Dust From Material Movement | — | — | — | — | — | — | 7.67 | 7.67 | — | 3.94 | 3.94 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.05 | 0.05 | 0.28 | 3.02 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 566 | 566 | 0.02 | < 0.005 | — | 568 |
| Dust From Material Movement | — | — | — | — | — | — | 0.82 | 0.82 | — | 0.42 | 0.42 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.05 | 0.55 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 93.7 | 93.7 | < 0.005 | < 0.005 | — | 94.0 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | 0.15 | 0.15 | — | 0.08 | 0.08 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.09 | 0.08 | 0.06 | 1.10 | 0.00 | 0.00 | 10.9 | 10.9 | 0.00 | 1.11 | 1.11 | — | 196 | 196 | 0.01 | 0.01 | 0.76 | 199 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.09 | 0.00 | 0.00 | 1.13 | 1.13 | 0.00 | 0.11 | 0.11 | — | 19.3 | 19.3 | < 0.005 | < 0.005 | 0.03 | 19.6 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.02 | 0.00 | 0.00 | 0.21 | 0.21 | 0.00 | 0.02 | 0.02 | — | 3.19 | 3.19 | < 0.005 | < 0.005 | 0.01 | 3.24 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.3. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 3.80 | 3.20 | 29.7 | 28.3 | 0.06 | 1.23 | — | 1.23 | 1.14 | — | 1.14 | — | 6,599 | 6,599 | 0.27 | 0.05 | — | 6,622 |
| Dust From Material Movement | — | — | — | — | — | — | 3.59 | 3.59 | — | 1.42 | 1.42 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 3.80 | 3.20 | 29.7 | 28.3 | 0.06 | 1.23 | — | 1.23 | 1.14 | — | 1.14 | — | 6,599 | 6,599 | 0.27 | 0.05 | — | 6,622 |
| Dust From Material Movement | — | — | — | — | — | — | 3.59 | 3.59 | — | 1.42 | 1.42 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.06 | 0.89 | 8.29 | 7.91 | 0.02 | 0.35 | — | 0.35 | 0.32 | — | 0.32 | — | 1,844 | 1,844 | 0.07 | 0.01 | — | 1,850 |
| Dust From Material Movement | — | — | — | — | — | — | 1.00 | 1.00 | — | 0.40 | 0.40 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.19 | 0.16 | 1.51 | 1.44 | < 0.005 | 0.06 | — | 0.06 | 0.06 | — | 0.06 | — | 305 | 305 | 0.01 | < 0.005 | — | 306 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | 0.18 | 0.18 | — | 0.07 | 0.07 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.10 | 0.10 | 0.07 | 1.26 | 0.00 | 0.00 | 12.4 | 12.4 | 0.00 | 1.26 | 1.26 | — | 224 | 224 | 0.01 | 0.01 | 0.87 | 228 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.09 | 0.09 | 0.09 | 0.99 | 0.00 | 0.00 | 12.4 | 12.4 | 0.00 | 1.26 | 1.26 | — | 202 | 202 | 0.01 | 0.01 | 0.02 | 204 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.02 | 0.02 | 0.28 | 0.00 | 0.00 | 3.37 | 3.37 | 0.00 | 0.34 | 0.34 | — | 57.6 | 57.6 | < 0.005 | < 0.005 | 0.10 | 58.4 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.05 | 0.00 | 0.00 | 0.61 | 0.61 | 0.00 | 0.06 | 0.06 | — | 9.54 | 9.54 | < 0.005 | < 0.005 | 0.02 | 9.68 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.4. Grading (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.64 | 0.64 | 4.43 | 35.3 | 0.06 | 0.12 | — | 0.12 | 0.12 | — | 0.12 | — | 6,599 | 6,599 | 0.27 | 0.05 | — | 6,622 |
| Dust From Material Movement | — | — | — | — | — | — | 3.59 | 3.59 | — | 1.42 | 1.42 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.64 | 0.64 | 4.43 | 35.3 | 0.06 | 0.12 | — | 0.12 | 0.12 | — | 0.12 | — | 6,599 | 6,599 | 0.27 | 0.05 | — | 6,622 |
| Dust From Material Movement | — | — | — | — | — | — | 3.59 | 3.59 | — | 1.42 | 1.42 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.18 | 0.18 | 1.24 | 9.88 | 0.02 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 1,844 | 1,844 | 0.07 | 0.01 | — | 1,850 |
| Dust From Material Movement | — | — | — | — | — | — | 1.00 | 1.00 | — | 0.40 | 0.40 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.03 | 0.23 | 1.80 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 305 | 305 | 0.01 | < 0.005 | — | 306 |
| Dust From Material Movement | — | — | — | — | — | — | 0.18 | 0.18 | — | 0.07 | 0.07 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.10 | 0.10 | 0.07 | 1.26 | 0.00 | 0.00 | 12.4 | 12.4 | 0.00 | 1.26 | 1.26 | — | 224 | 224 | 0.01 | 0.01 | 0.87 | 228 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.09 | 0.09 | 0.09 | 0.99 | 0.00 | 0.00 | 12.4 | 12.4 | 0.00 | 1.26 | 1.26 | — | 202 | 202 | 0.01 | 0.01 | 0.02 | 204 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.02 | 0.02 | 0.28 | 0.00 | 0.00 | 3.37 | 3.37 | 0.00 | 0.34 | 0.34 | — | 57.6 | 57.6 | < 0.005 | < 0.005 | 0.10 | 58.4 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.05 | 0.00 | 0.00 | 0.61 | 0.61 | 0.00 | 0.06 | 0.06 | — | 9.54 | 9.54 | < 0.005 | < 0.005 | 0.02 | 9.68 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.5. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.35 | 1.13 | 10.4 | 13.0 | 0.02 | 0.43 | — | 0.43 | 0.40 | — | 0.40 | — | 2,398 | 2,398 | 0.10 | 0.02 | — | 2,406 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.21 | 0.17 | 1.59 | 1.99 | < 0.005 | 0.07 | — | 0.07 | 0.06 | — | 0.06 | — | 366 | 366 | 0.01 | < 0.005 | — | 367 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.03 | 0.29 | 0.36 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 60.6 | 60.6 | < 0.005 | < 0.005 | — | 60.8 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.93 | 0.84 | 0.87 | 9.76 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 1,987 | 1,987 | 0.05 | 0.08 | 0.22 | 2,012 |
| Vendor | 0.07 | 0.06 | 3.24 | 0.55 | 0.01 | 0.02 | 24.5 | 24.6 | 0.02 | 2.53 | 2.55 | — | 2,019 | 2,019 | < 0.005 | 0.31 | 0.12 | 2,110 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.14 | 0.13 | 0.12 | 1.52 | 0.00 | 0.00 | 18.1 | 18.1 | 0.00 | 1.85 | 1.85 | — | 310 | 310 | 0.01 | 0.01 | 0.56 | 314 |
| Vendor | 0.01 | 0.01 | 0.49 | 0.08 | < 0.005 | < 0.005 | 3.64 | 3.64 | < 0.005 | 0.38 | 0.38 | — | 308 | 308 | < 0.005 | 0.05 | 0.32 | 322 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.02 | 0.02 | 0.28 | 0.00 | 0.00 | 3.30 | 3.30 | 0.00 | 0.34 | 0.34 | — | 51.3 | 51.3 | < 0.005 | < 0.005 | 0.09 | 52.0 |
| Vendor | < 0.005 | < 0.005 | 0.09 | 0.02 | < 0.005 | < 0.005 | 0.66 | 0.67 | < 0.005 | 0.07 | 0.07 | — | 51.0 | 51.0 | < 0.005 | 0.01 | 0.05 | 53.4 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.6. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.35 | 0.33 | 2.82 | 14.8 | 0.02 | 0.08 | — | 0.08 | 0.07 | — | 0.07 | — | 2,398 | 2,398 | 0.10 | 0.02 | — | 2,406 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 0.05 | 0.05 | 0.43 | 2.26 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 366 | 366 | 0.01 | < 0.005 | — | 367 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.08 | 0.41 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 60.6 | 60.6 | < 0.005 | < 0.005 | — | 60.8 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.93 | 0.84 | 0.87 | 9.76 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 1,987 | 1,987 | 0.05 | 0.08 | 0.22 | 2,012 |
| Vendor | 0.07 | 0.06 | 3.24 | 0.55 | 0.01 | 0.02 | 24.5 | 24.6 | 0.02 | 2.53 | 2.55 | — | 2,019 | 2,019 | < 0.005 | 0.31 | 0.12 | 2,110 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.14 | 0.13 | 0.12 | 1.52 | 0.00 | 0.00 | 18.1 | 18.1 | 0.00 | 1.85 | 1.85 | — | 310 | 310 | 0.01 | 0.01 | 0.56 | 314 |
| Vendor | 0.01 | 0.01 | 0.49 | 0.08 | < 0.005 | < 0.005 | 3.64 | 3.64 | < 0.005 | 0.38 | 0.38 | — | 308 | 308 | < 0.005 | 0.05 | 0.32 | 322 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.02 | 0.02 | 0.28 | 0.00 | 0.00 | 3.30 | 3.30 | 0.00 | 0.34 | 0.34 | — | 51.3 | 51.3 | < 0.005 | < 0.005 | 0.09 | 52.0 |
| Vendor | < 0.005 | < 0.005 | 0.09 | 0.02 | < 0.005 | < 0.005 | 0.66 | 0.67 | < 0.005 | 0.07 | 0.07 | — | 51.0 | 51.0 | < 0.005 | 0.01 | 0.05 | 53.4 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.7. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.28 | 1.07 | 9.85 | 13.0 | 0.02 | 0.38 | — | 0.38 | 0.35 | — | 0.35 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.28 | 1.07 | 9.85 | 13.0 | 0.02 | 0.38 | — | 0.38 | 0.35 | — | 0.35 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.91 | 0.77 | 7.04 | 9.26 | 0.02 | 0.27 | — | 0.27 | 0.25 | — | 0.25 | — | 1,712 | 1,712 | 0.07 | 0.01 | — | 1,718 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.17 | 0.14 | 1.28 | 1.69 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 283 | 283 | 0.01 | < 0.005 | — | 284 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.98 | 0.90 | 0.58 | 11.6 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 2,167 | 2,167 | 0.03 | 0.08 | 7.82 | 2,199 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.06 | 0.06 | 2.87 | 0.50 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,987 | 1,987 | < 0.005 | 0.31 | 4.44 | 2,083 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.90 | 0.81 | 0.80 | 9.09 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 1,950 | 1,950 | 0.05 | 0.08 | 0.20 | 1,976 |
| Vendor | 0.06 | 0.06 | 3.03 | 0.53 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,987 | 1,987 | < 0.005 | 0.31 | 0.12 | 2,079 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.64 | 0.58 | 0.52 | 6.59 | 0.00 | 0.00 | 84.7 | 84.7 | 0.00 | 8.64 | 8.64 | — | 1,423 | 1,423 | 0.03 | 0.06 | 2.41 | 1,443 |
| Vendor | 0.04 | 0.04 | 2.14 | 0.37 | 0.01 | 0.01 | 17.0 | 17.0 | 0.01 | 1.76 | 1.77 | — | 1,419 | 1,419 | < 0.005 | 0.22 | 1.37 | 1,486 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.12 | 0.11 | 0.09 | 1.20 | 0.00 | 0.00 | 15.5 | 15.5 | 0.00 | 1.58 | 1.58 | — | 236 | 236 | 0.01 | 0.01 | 0.40 | 239 |
| Vendor | 0.01 | 0.01 | 0.39 | 0.07 | < 0.005 | < 0.005 | 3.11 | 3.11 | < 0.005 | 0.32 | 0.32 | — | 235 | 235 | < 0.005 | 0.04 | 0.23 | 246 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.8. Building Construction (2026) - Mitigated

### Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.35 | 0.33 | 2.82 | 14.8 | 0.02 | 0.07 | — | 0.07 | 0.07 | — | 0.07 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.35 | 0.33 | 2.82 | 14.8 | 0.02 | 0.07 | — | 0.07 | 0.07 | — | 0.07 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.25 | 0.23 | 2.01 | 10.6 | 0.02 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 1,712 | 1,712 | 0.07 | 0.01 | — | 1,718 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.05 | 0.04 | 0.37 | 1.93 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 283 | 283 | 0.01 | < 0.005 | — | 284 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.98 | 0.90 | 0.58 | 11.6 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 2,167 | 2,167 | 0.03 | 0.08 | 7.82 | 2,199 |
| Vendor | 0.06 | 0.06 | 2.87 | 0.50 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,987 | 1,987 | < 0.005 | 0.31 | 4.44 | 2,083 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.90 | 0.81 | 0.80 | 9.09 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 1,950 | 1,950 | 0.05 | 0.08 | 0.20 | 1,976 |
| Vendor | 0.06 | 0.06 | 3.03 | 0.53 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,987 | 1,987 | < 0.005 | 0.31 | 0.12 | 2,079 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.64 | 0.58 | 0.52 | 6.59 | 0.00 | 0.00 | 84.7 | 84.7 | 0.00 | 8.64 | 8.64 | — | 1,423 | 1,423 | 0.03 | 0.06 | 2.41 | 1,443 |
| Vendor | 0.04 | 0.04 | 2.14 | 0.37 | 0.01 | 0.01 | 17.0 | 17.0 | 0.01 | 1.76 | 1.77 | — | 1,419 | 1,419 | < 0.005 | 0.22 | 1.37 | 1,486 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.12 | 0.11 | 0.09 | 1.20 | 0.00 | 0.00 | 15.5 | 15.5 | 0.00 | 1.58 | 1.58 | — | 236 | 236 | 0.01 | 0.01 | 0.40 | 239 |
| Vendor | 0.01 | 0.01 | 0.39 | 0.07 | < 0.005 | < 0.005 | 3.11 | 3.11 | < 0.005 | 0.32 | 0.32 | — | 235 | 235 | < 0.005 | 0.04 | 0.23 | 246 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.9. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.23 | 1.03 | 9.39 | 12.9 | 0.02 | 0.34 | — | 0.34 | 0.31 | — | 0.31 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.23 | 1.03 | 9.39 | 12.9 | 0.02 | 0.34 | — | 0.34 | 0.31 | — | 0.31 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.88 | 0.74 | 6.71 | 9.24 | 0.02 | 0.24 | — | 0.24 | 0.22 | — | 0.22 | — | 1,712 | 1,712 | 0.07 | 0.01 | — | 1,718 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.16 | 0.13 | 1.22 | 1.69 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 283 | 283 | 0.01 | < 0.005 | — | 284 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.94 | 0.86 | 0.57 | 10.9 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 2,131 | 2,131 | 0.03 | 0.08 | 7.12 | 2,161 |
| Vendor | 0.06 | 0.05 | 2.71 | 0.49 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,950 | 1,950 | < 0.005 | 0.29 | 4.04 | 2,042 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.81 | 0.78 | 0.73 | 8.50 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 1,918 | 1,918 | 0.05 | 0.08 | 0.18 | 1,943 |
| Vendor | 0.06 | 0.04 | 2.86 | 0.52 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,950 | 1,950 | < 0.005 | 0.29 | 0.10 | 2,038 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.58 | 0.56 | 0.47 | 6.19 | 0.00 | 0.00 | 84.7 | 84.7 | 0.00 | 8.64 | 8.64 | — | 1,400 | 1,400 | 0.03 | 0.06 | 2.20 | 1,420 |
| Vendor | 0.04 | 0.03 | 2.02 | 0.36 | 0.01 | 0.01 | 17.0 | 17.0 | 0.01 | 1.76 | 1.77 | — | 1,393 | 1,393 | < 0.005 | 0.21 | 1.25 | 1,457 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.10 | 0.10 | 0.09 | 1.13 | 0.00 | 0.00 | 15.5 | 15.5 | 0.00 | 1.58 | 1.58 | — | 232 | 232 | 0.01 | 0.01 | 0.36 | 235 |
| Vendor | 0.01 | 0.01 | 0.37 | 0.07 | < 0.005 | < 0.005 | 3.11 | 3.11 | < 0.005 | 0.32 | 0.32 | — | 231 | 231 | < 0.005 | 0.03 | 0.21 | 241 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.10. Building Construction (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.35 | 0.33 | 2.82 | 14.8 | 0.02 | 0.07 | — | 0.07 | 0.07 | — | 0.07 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.35 | 0.33 | 2.82 | 14.8 | 0.02 | 0.07 | — | 0.07 | 0.07 | — | 0.07 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.25 | 0.23 | 2.01 | 10.6 | 0.02 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 1,712 | 1,712 | 0.07 | 0.01 | — | 1,718 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.05 | 0.04 | 0.37 | 1.93 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 283 | 283 | 0.01 | < 0.005 | — | 284 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.94 | 0.86 | 0.57 | 10.9 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 2,131 | 2,131 | 0.03 | 0.08 | 7.12 | 2,161 |
| Vendor | 0.06 | 0.05 | 2.71 | 0.49 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,950 | 1,950 | < 0.005 | 0.29 | 4.04 | 2,042 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.81 | 0.78 | 0.73 | 8.50 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 1,918 | 1,918 | 0.05 | 0.08 | 0.18 | 1,943 |
| Vendor | 0.06 | 0.04 | 2.86 | 0.52 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,950 | 1,950 | < 0.005 | 0.29 | 0.10 | 2,038 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.58 | 0.56 | 0.47 | 6.19 | 0.00 | 0.00 | 84.7 | 84.7 | 0.00 | 8.64 | 8.64 | — | 1,400 | 1,400 | 0.03 | 0.06 | 2.20 | 1,420 |
| Vendor | 0.04 | 0.03 | 2.02 | 0.36 | 0.01 | 0.01 | 17.0 | 17.0 | 0.01 | 1.76 | 1.77 | — | 1,393 | 1,393 | < 0.005 | 0.21 | 1.25 | 1,457 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.10 | 0.10 | 0.09 | 1.13 | 0.00 | 0.00 | 15.5 | 15.5 | 0.00 | 1.58 | 1.58 | — | 232 | 232 | 0.01 | 0.01 | 0.36 | 235 |
| Vendor | 0.01 | 0.01 | 0.37 | 0.07 | < 0.005 | < 0.005 | 3.11 | 3.11 | < 0.005 | 0.32 | 0.32 | — | 231 | 231 | < 0.005 | 0.03 | 0.21 | 241 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.11. Building Construction (2028) - Unmitigated

### Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 1.18 | 0.99 | 8.92 | 12.9 | 0.02 | 0.30 | — | 0.30 | 0.28 | — | 0.28 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,406 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.18 | 0.99 | 8.92 | 12.9 | 0.02 | 0.30 | — | 0.30 | 0.28 | — | 0.28 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,406 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.85 | 0.71 | 6.39 | 9.26 | 0.02 | 0.22 | — | 0.22 | 0.20 | — | 0.20 | — | 1,717 | 1,717 | 0.07 | 0.01 | — | 1,723 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.15 | 0.13 | 1.17 | 1.69 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 284 | 284 | 0.01 | < 0.005 | — | 285 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.84 | 0.83 | 0.51 | 10.2 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 2,089 | 2,089 | 0.03 | 0.08 | 6.47 | 2,119 |
| Vendor | 0.06 | 0.05 | 2.55 | 0.47 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,904 | 1,904 | < 0.005 | 0.29 | 3.64 | 1,996 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.77 | 0.69 | 0.66 | 7.97 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 1,881 | 1,881 | 0.04 | 0.08 | 0.17 | 1,906 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.06 | 0.04 | 2.69 | 0.49 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,905 | 1,905 | < 0.005 | 0.29 | 0.09 | 1,992 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.56 | 0.54 | 0.42 | 5.85 | 0.00 | 0.00 | 85.0 | 85.0 | 0.00 | 8.66 | 8.66 | — | 1,376 | 1,376 | 0.03 | 0.06 | 2.00 | 1,396 |
| Vendor | 0.04 | 0.03 | 1.90 | 0.34 | 0.01 | 0.01 | 17.1 | 17.1 | 0.01 | 1.76 | 1.77 | — | 1,364 | 1,364 | < 0.005 | 0.21 | 1.12 | 1,428 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.10 | 0.10 | 0.08 | 1.07 | 0.00 | 0.00 | 15.5 | 15.5 | 0.00 | 1.58 | 1.58 | — | 228 | 228 | < 0.005 | 0.01 | 0.33 | 231 |
| Vendor | 0.01 | 0.01 | 0.35 | 0.06 | < 0.005 | < 0.005 | 3.12 | 3.12 | < 0.005 | 0.32 | 0.32 | — | 226 | 226 | < 0.005 | 0.03 | 0.19 | 236 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.12. Building Construction (2028) - Mitigated

### Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.35 | 0.33 | 2.81 | 14.8 | 0.02 | 0.07 | — | 0.07 | 0.07 | — | 0.07 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,406 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.35 | 0.33 | 2.81 | 14.8 | 0.02 | 0.07 | — | 0.07 | 0.07 | — | 0.07 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,406 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.25 | 0.24 | 2.02 | 10.6 | 0.02 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 1,717 | 1,717 | 0.07 | 0.01 | — | 1,723 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.05 | 0.04 | 0.37 | 1.94 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 284 | 284 | 0.01 | < 0.005 | — | 285 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.84 | 0.83 | 0.51 | 10.2 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 2,089 | 2,089 | 0.03 | 0.08 | 6.47 | 2,119 |
| Vendor | 0.06 | 0.05 | 2.55 | 0.47 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,904 | 1,904 | < 0.005 | 0.29 | 3.64 | 1,996 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.77 | 0.69 | 0.66 | 7.97 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 1,881 | 1,881 | 0.04 | 0.08 | 0.17 | 1,906 |
| Vendor | 0.06 | 0.04 | 2.69 | 0.49 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,905 | 1,905 | < 0.005 | 0.29 | 0.09 | 1,992 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.56 | 0.54 | 0.42 | 5.85 | 0.00 | 0.00 | 85.0 | 85.0 | 0.00 | 8.66 | 8.66 | — | 1,376 | 1,376 | 0.03 | 0.06 | 2.00 | 1,396 |
| Vendor | 0.04 | 0.03 | 1.90 | 0.34 | 0.01 | 0.01 | 17.1 | 17.1 | 0.01 | 1.76 | 1.77 | — | 1,364 | 1,364 | < 0.005 | 0.21 | 1.12 | 1,428 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.10 | 0.10 | 0.08 | 1.07 | 0.00 | 0.00 | 15.5 | 15.5 | 0.00 | 1.58 | 1.58 | — | 228 | 228 | < 0.005 | 0.01 | 0.33 | 231 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.01 | 0.01 | 0.35 | 0.06 | < 0.005 | < 0.005 | 3.12 | 3.12 | < 0.005 | 0.32 | 0.32 | — | 226 | 226 | < 0.005 | 0.03 | 0.19 | 236 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.13. Building Construction (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.15 | 0.97 | 8.58 | 12.9 | 0.02 | 0.28 | — | 0.28 | 0.25 | — | 0.25 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.15 | 0.97 | 8.58 | 12.9 | 0.02 | 0.28 | — | 0.28 | 0.25 | — | 0.25 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.57 | 0.48 | 4.25 | 6.39 | 0.01 | 0.14 | — | 0.14 | 0.13 | — | 0.13 | — | 1,187 | 1,187 | 0.05 | 0.01 | — | 1,191 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.10 | 0.09 | 0.78 | 1.17 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 196 | 196 | 0.01 | < 0.005 | — | 197 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.81 | 0.74 | 0.44 | 9.57 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 2,054 | 2,054 | 0.03 | 0.08 | 5.84 | 2,083 |
| Vendor | 0.06 | 0.05 | 2.39 | 0.46 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,850 | 1,850 | < 0.005 | 0.28 | 3.25 | 1,938 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.75 | 0.67 | 0.59 | 7.46 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 1,850 | 1,850 | 0.04 | 0.08 | 0.15 | 1,874 |
| Vendor | 0.06 | 0.04 | 2.52 | 0.48 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,851 | 1,851 | < 0.005 | 0.28 | 0.08 | 1,935 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.37 | 0.33 | 0.29 | 3.77 | 0.00 | 0.00 | 58.7 | 58.7 | 0.00 | 5.99 | 5.99 | — | 935 | 935 | 0.02 | 0.04 | 1.25 | 948 |
| Vendor | 0.03 | 0.02 | 1.24 | 0.23 | 0.01 | 0.01 | 11.8 | 11.8 | 0.01 | 1.22 | 1.22 | — | 916 | 916 | < 0.005 | 0.14 | 0.70 | 958 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.07 | 0.06 | 0.05 | 0.69 | 0.00 | 0.00 | 10.7 | 10.7 | 0.00 | 1.09 | 1.09 | — | 155 | 155 | < 0.005 | 0.01 | 0.21 | 157 |
| Vendor | 0.01 | < 0.005 | 0.23 | 0.04 | < 0.005 | < 0.005 | 2.16 | 2.16 | < 0.005 | 0.22 | 0.22 | — | 152 | 152 | < 0.005 | 0.02 | 0.12 | 159 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.14. Building Construction (2029) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 0.35 | 0.33 | 2.81 | 14.8 | 0.02 | 0.07 | — | 0.07 | 0.07 | — | 0.07 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.35 | 0.33 | 2.81 | 14.8 | 0.02 | 0.07 | — | 0.07 | 0.07 | — | 0.07 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.17 | 0.16 | 1.39 | 7.34 | 0.01 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 1,187 | 1,187 | 0.05 | 0.01 | — | 1,191 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.03 | 0.25 | 1.34 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 196 | 196 | 0.01 | < 0.005 | — | 197 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.81 | 0.74 | 0.44 | 9.57 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 2,054 | 2,054 | 0.03 | 0.08 | 5.84 | 2,083 |
| Vendor | 0.06 | 0.05 | 2.39 | 0.46 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,850 | 1,850 | < 0.005 | 0.28 | 3.25 | 1,938 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.75 | 0.67 | 0.59 | 7.46 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 1,850 | 1,850 | 0.04 | 0.08 | 0.15 | 1,874 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.06 | 0.04 | 2.52 | 0.48 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,851 | 1,851 | < 0.005 | 0.28 | 0.08 | 1,935 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.37 | 0.33 | 0.29 | 3.77 | 0.00 | 0.00 | 58.7 | 58.7 | 0.00 | 5.99 | 5.99 | — | 935 | 935 | 0.02 | 0.04 | 1.25 | 948 |
| Vendor | 0.03 | 0.02 | 1.24 | 0.23 | 0.01 | 0.01 | 11.8 | 11.8 | 0.01 | 1.22 | 1.22 | — | 916 | 916 | < 0.005 | 0.14 | 0.70 | 958 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.07 | 0.06 | 0.05 | 0.69 | 0.00 | 0.00 | 10.7 | 10.7 | 0.00 | 1.09 | 1.09 | — | 155 | 155 | < 0.005 | 0.01 | 0.21 | 157 |
| Vendor | 0.01 | < 0.005 | 0.23 | 0.04 | < 0.005 | < 0.005 | 2.16 | 2.16 | < 0.005 | 0.22 | 0.22 | — | 152 | 152 | < 0.005 | 0.02 | 0.12 | 159 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.15. Paving (2029) - Unmitigated

### Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.80 | 0.67 | 6.46 | 9.92 | 0.01 | 0.24 | — | 0.24 | 0.22 | — | 0.22 | — | 1,511 | 1,511 | 0.06 | 0.01 | — | 1,516 |
| Paving | — | 2.39 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.80 | 0.67 | 6.46 | 9.92 | 0.01 | 0.24 | — | 0.24 | 0.22 | — | 0.22 | — | 1,511 | 1,511 | 0.06 | 0.01 | — | 1,516 |
| Paving | — | 2.39 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.16 | 0.13 | 1.27 | 1.96 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 298 | 298 | 0.01 | < 0.005 | — | 299 |
| Paving | — | 0.47 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.23 | 0.36 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 49.3 | 49.3 | < 0.005 | < 0.005 | — | 49.5 |
| Paving | — | 0.09 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.06 | 0.06 | 0.03 | 0.73 | 0.00 | 0.00 | 9.30 | 9.30 | 0.00 | 0.95 | 0.95 | — | 157 | 157 | < 0.005 | 0.01 | 0.44 | 159 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.06 | 0.05 | 0.05 | 0.57 | 0.00 | 0.00 | 9.30 | 9.30 | 0.00 | 0.95 | 0.95 | — | 141 | 141 | < 0.005 | 0.01 | 0.01 | 143 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.11 | 0.00 | 0.00 | 1.78 | 1.78 | 0.00 | 0.18 | 0.18 | — | 28.4 | 28.4 | < 0.005 | < 0.005 | 0.04 | 28.8 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

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| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.02 | 0.00 | 0.00 | 0.33 | 0.33 | 0.00 | 0.03 | 0.03 | — | 4.70 | 4.70 | < 0.005 | < 0.005 | 0.01 | 4.77 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.16. Paving (2029) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.16 | 0.16 | 1.93 | 10.6 | 0.01 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 1,511 | 1,511 | 0.06 | 0.01 | — | 1,516 |
| Paving | — | 2.39 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.16 | 0.16 | 1.93 | 10.6 | 0.01 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 1,511 | 1,511 | 0.06 | 0.01 | — | 1,516 |
| Paving | — | 2.39 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.03 | 0.38 | 2.09 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 298 | 298 | 0.01 | < 0.005 | — | 299 |
| Paving | — | 0.47 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.07 | 0.38 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 49.3 | 49.3 | < 0.005 | < 0.005 | — | 49.5 |
| Paving | — | 0.09 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.06 | 0.06 | 0.03 | 0.73 | 0.00 | 0.00 | 9.30 | 9.30 | 0.00 | 0.95 | 0.95 | — | 157 | 157 | < 0.005 | 0.01 | 0.44 | 159 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.06 | 0.05 | 0.05 | 0.57 | 0.00 | 0.00 | 9.30 | 9.30 | 0.00 | 0.95 | 0.95 | — | 141 | 141 | < 0.005 | 0.01 | 0.01 | 143 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.11 | 0.00 | 0.00 | 1.78 | 1.78 | 0.00 | 0.18 | 0.18 | — | 28.4 | 28.4 | < 0.005 | < 0.005 | 0.04 | 28.8 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.02 | 0.00 | 0.00 | 0.33 | 0.33 | 0.00 | 0.03 | 0.03 | — | 4.70 | 4.70 | < 0.005 | < 0.005 | 0.01 | 4.77 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.17. Architectural Coating (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.12 | 0.10 | 0.79 | 1.11 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 134 | 134 | 0.01 | < 0.005 | — | 134 |
| Architectural Coatings | — | 129 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.02 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 3.14 | 3.14 | < 0.005 | < 0.005 | — | 3.15 |
| Architectural Coatings | — | 3.02 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.52 | 0.52 | < 0.005 | < 0.005 | — | 0.52 |
| Architectural Coatings | — | 0.55 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.15 | 0.13 | 0.12 | 1.49 | 0.00 | 0.00 | 24.4 | 24.4 | 0.00 | 2.49 | 2.49 | — | 370 | 370 | 0.01 | 0.02 | 0.03 | 375 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.04 | 0.00 | 0.00 | 0.56 | 0.56 | 0.00 | 0.06 | 0.06 | — | 8.87 | 8.87 | < 0.005 | < 0.005 | 0.01 | 9.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.01 | 0.01 | — | 1.47 | 1.47 | < 0.005 | < 0.005 | < 0.005 | 1.49 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.18. Architectural Coating (2029) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.65 | 0.96 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 134 | 134 | 0.01 | < 0.005 | — | 134 |
| Architectural Coatings | — | 129 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 3.14 | 3.14 | < 0.005 | < 0.005 | — | 3.15 |
| Architectural Coatings | — | 3.02 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.52 | 0.52 | < 0.005 | < 0.005 | — | 0.52 |
| Architectural Coatings | — | 0.55 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.15 | 0.13 | 0.12 | 1.49 | 0.00 | 0.00 | 24.4 | 24.4 | 0.00 | 2.49 | 2.49 | — | 370 | 370 | 0.01 | 0.02 | 0.03 | 375 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.04 | 0.00 | 0.00 | 0.56 | 0.56 | 0.00 | 0.06 | 0.06 | — | 8.87 | 8.87 | < 0.005 | < 0.005 | 0.01 | 9.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.01 | 0.01 | — | 1.47 | 1.47 | < 0.005 | < 0.005 | < 0.005 | 1.49 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.19. Architectural Coating (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.12 | 0.10 | 0.78 | 1.11 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 134 | 134 | 0.01 | < 0.005 | — | 134 |
| Architectural Coatings | — | 129 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 0.02 | 0.02 | 0.14 | 0.19 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 23.0 | 23.0 | < 0.005 | < 0.005 | — | 23.1 |
| Architectural Coatings | — | 22.2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.02 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 3.81 | 3.81 | < 0.005 | < 0.005 | — | 3.82 |
| Architectural Coatings | — | 4.04 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.14 | 0.13 | 0.10 | 1.40 | 0.00 | 0.00 | 24.4 | 24.4 | 0.00 | 2.49 | 2.49 | — | 364 | 364 | 0.01 | 0.02 | 0.03 | 369 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.02 | 0.02 | 0.02 | 0.25 | 0.00 | 0.00 | 4.09 | 4.09 | 0.00 | 0.42 | 0.42 | — | 64.0 | 64.0 | < 0.005 | < 0.005 | 0.08 | 64.9 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.04 | 0.00 | 0.00 | 0.75 | 0.75 | 0.00 | 0.08 | 0.08 | — | 10.6 | 10.6 | < 0.005 | < 0.005 | 0.01 | 10.7 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.20. Architectural Coating (2030) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.65 | 0.96 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 134 | 134 | 0.01 | < 0.005 | — | 134 |
| Architectural Coatings | — | 129 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.11 | 0.17 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 23.0 | 23.0 | < 0.005 | < 0.005 | — | 23.1 |
| Architectural Coatings | — | 22.2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.02 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 3.81 | 3.81 | < 0.005 | < 0.005 | — | 3.82 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Architect Coatings | — | 4.04 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.14 | 0.13 | 0.10 | 1.40 | 0.00 | 0.00 | 24.4 | 24.4 | 0.00 | 2.49 | 2.49 | — | 364 | 364 | 0.01 | 0.02 | 0.03 | 369 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.02 | 0.02 | 0.02 | 0.25 | 0.00 | 0.00 | 4.09 | 4.09 | 0.00 | 0.42 | 0.42 | — | 64.0 | 64.0 | < 0.005 | < 0.005 | 0.08 | 64.9 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.04 | 0.00 | 0.00 | 0.75 | 0.75 | 0.00 | 0.08 | 0.08 | — | 10.6 | 10.6 | < 0.005 | < 0.005 | 0.01 | 10.7 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.21. Linear, Grubbing & Land Clearing (2025) - Unmitigated

### Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.93 | 0.78 | 6.78 | 6.98 | 0.01 | 0.42 | — | 0.42 | 0.39 | — | 0.39 | — | 981 | 981 | 0.04 | 0.01 | — | 984 |
| Dust From Material Movement | — | — | — | — | — | — | 0.41 | 0.41 | — | 0.04 | 0.04 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.09 | 0.07 | 0.65 | 0.67 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 94.0 | 94.0 | < 0.005 | < 0.005 | — | 94.4 |
| Dust From Material Movement | — | — | — | — | — | — | 0.04 | 0.04 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.01 | 0.12 | 0.12 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 15.6 | 15.6 | < 0.005 | < 0.005 | — | 15.6 |
| Dust From Material Movement | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.31 | 0.29 | 0.20 | 3.77 | 0.00 | 0.00 | 37.2 | 37.2 | 0.00 | 3.79 | 3.79 | — | 673 | 673 | 0.03 | 0.02 | 2.60 | 684 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.02 | 0.02 | 0.29 | 0.00 | 0.00 | 3.47 | 3.47 | 0.00 | 0.35 | 0.35 | — | 59.3 | 59.3 | < 0.005 | < 0.005 | 0.11 | 60.2 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.05 | 0.00 | 0.00 | 0.63 | 0.63 | 0.00 | 0.06 | 0.06 | — | 9.82 | 9.82 | < 0.005 | < 0.005 | 0.02 | 9.96 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.22. Linear, Grubbing & Land Clearing (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.11 | 0.11 | 1.67 | 6.86 | 0.01 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 981 | 981 | 0.04 | 0.01 | — | 984 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | 0.41 | 0.41 | — | 0.04 | 0.04 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.16 | 0.66 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 94.0 | 94.0 | < 0.005 | < 0.005 | — | 94.4 |
| Dust From Material Movement | — | — | — | — | — | — | 0.04 | 0.04 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.03 | 0.12 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 15.6 | 15.6 | < 0.005 | < 0.005 | — | 15.6 |
| Dust From Material Movement | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.31 | 0.29 | 0.20 | 3.77 | 0.00 | 0.00 | 37.2 | 37.2 | 0.00 | 3.79 | 3.79 | — | 673 | 673 | 0.03 | 0.02 | 2.60 | 684 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.02 | 0.02 | 0.29 | 0.00 | 0.00 | 3.47 | 3.47 | 0.00 | 0.35 | 0.35 | — | 59.3 | 59.3 | < 0.005 | < 0.005 | 0.11 | 60.2 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.05 | 0.00 | 0.00 | 0.63 | 0.63 | 0.00 | 0.06 | 0.06 | — | 9.82 | 9.82 | < 0.005 | < 0.005 | 0.02 | 9.96 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.23. Linear, Grading & Excavation (2025) - Unmitigated

### Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 7.41 | 6.23 | 54.6 | 58.8 | 0.12 | 2.41 | — | 2.41 | 2.22 | — | 2.22 | — | 12,991 | 12,991 | 0.53 | 0.11 | — | 13,036 |
| Dust From Material Movement | — | — | — | — | — | — | 2.48 | 2.48 | — | 0.27 | 0.27 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.71 | 0.60 | 5.23 | 5.64 | 0.01 | 0.23 | — | 0.23 | 0.21 | — | 0.21 | — | 1,246 | 1,246 | 0.05 | 0.01 | — | 1,250 |
| Dust From Material Movement | — | — | — | — | — | — | 0.24 | 0.24 | — | 0.03 | 0.03 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.13 | 0.11 | 0.96 | 1.03 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 206 | 206 | 0.01 | < 0.005 | — | 207 |
| Dust From Material Movement | — | — | — | — | — | — | 0.04 | 0.04 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.57 | 0.53 | 0.36 | 6.92 | 0.00 | 0.00 | 68.2 | 68.2 | 0.00 | 6.95 | 6.95 | — | 1,234 | 1,234 | 0.06 | 0.04 | 4.77 | 1,253 |
| Vendor | < 0.005 | < 0.005 | 0.10 | 0.02 | < 0.005 | < 0.005 | 0.77 | 0.77 | < 0.005 | 0.08 | 0.08 | — | 63.0 | 63.0 | < 0.005 | 0.01 | 0.15 | 66.0 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.04 | 0.53 | 0.00 | 0.00 | 6.36 | 6.36 | 0.00 | 0.65 | 0.65 | — | 109 | 109 | < 0.005 | < 0.005 | 0.20 | 110 |
| Vendor | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | 0.07 | 0.07 | < 0.005 | 0.01 | 0.01 | — | 6.04 | 6.04 | < 0.005 | < 0.005 | 0.01 | 6.32 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.10 | 0.00 | 0.00 | 1.16 | 1.16 | 0.00 | 0.12 | 0.12 | — | 18.0 | 18.0 | < 0.005 | < 0.005 | 0.03 | 18.3 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 1.00 | 1.00 | < 0.005 | < 0.005 | < 0.005 | 1.05 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.24. Linear, Grading & Excavation (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.31 | 1.31 | 12.3 | 75.1 | 0.12 | 0.24 | — | 0.24 | 0.24 | — | 0.24 | — | 12,991 | 12,991 | 0.53 | 0.11 | — | 13,036 |
| Dust From Material Movement | — | — | — | — | — | — | 2.48 | 2.48 | — | 0.27 | 0.27 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.13 | 0.13 | 1.18 | 7.20 | 0.01 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 1,246 | 1,246 | 0.05 | 0.01 | — | 1,250 |
| Dust From Material Movement | — | — | — | — | — | — | 0.24 | 0.24 | — | 0.03 | 0.03 | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.22 | 1.31 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 206 | 206 | 0.01 | < 0.005 | — | 207 |
| Dust From Material Movement | — | — | — | — | — | — | 0.04 | 0.04 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.57 | 0.53 | 0.36 | 6.92 | 0.00 | 0.00 | 68.2 | 68.2 | 0.00 | 6.95 | 6.95 | — | 1,234 | 1,234 | 0.06 | 0.04 | 4.77 | 1,253 |
| Vendor | < 0.005 | < 0.005 | 0.10 | 0.02 | < 0.005 | < 0.005 | 0.77 | 0.77 | < 0.005 | 0.08 | 0.08 | — | 63.0 | 63.0 | < 0.005 | 0.01 | 0.15 | 66.0 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.04 | 0.53 | 0.00 | 0.00 | 6.36 | 6.36 | 0.00 | 0.65 | 0.65 | — | 109 | 109 | < 0.005 | < 0.005 | 0.20 | 110 |
| Vendor | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | 0.07 | 0.07 | < 0.005 | 0.01 | 0.01 | — | 6.04 | 6.04 | < 0.005 | < 0.005 | 0.01 | 6.32 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.10 | 0.00 | 0.00 | 1.16 | 1.16 | 0.00 | 0.12 | 0.12 | — | 18.0 | 18.0 | < 0.005 | < 0.005 | 0.03 | 18.3 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 1.00 | 1.00 | < 0.005 | < 0.005 | < 0.005 | 1.05 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.25. Linear, Drainage, Utilities, & Sub-Grade (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 5.99 | 5.02 | 45.9 | 47.3 | 0.11 | 1.83 | — | 1.83 | 1.68 | — | 1.68 | — | 11,387 | 11,387 | 0.46 | 0.09 | — | 11,426 |
| Dust From Material Movement | — | — | — | — | — | — | 2.07 | 2.07 | — | 0.22 | 0.22 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.57 | 0.48 | 4.40 | 4.53 | 0.01 | 0.18 | — | 0.18 | 0.16 | — | 0.16 | — | 1,092 | 1,092 | 0.04 | 0.01 | — | 1,096 |
| Dust From Material Movement | — | — | — | — | — | — | 0.20 | 0.20 | — | 0.02 | 0.02 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.10 | 0.09 | 0.80 | 0.83 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 181 | 181 | 0.01 | < 0.005 | — | 181 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | 0.04 | 0.04 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.52 | 0.48 | 0.33 | 6.29 | 0.00 | 0.00 | 62.0 | 62.0 | 0.00 | 6.32 | 6.32 | — | 1,122 | 1,122 | 0.05 | 0.04 | 4.34 | 1,139 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.04 | 0.04 | 0.48 | 0.00 | 0.00 | 5.78 | 5.78 | 0.00 | 0.59 | 0.59 | — | 98.9 | 98.9 | < 0.005 | < 0.005 | 0.18 | 100 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.09 | 0.00 | 0.00 | 1.05 | 1.05 | 0.00 | 0.11 | 0.11 | — | 16.4 | 16.4 | < 0.005 | < 0.005 | 0.03 | 16.6 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.26. Linear, Drainage, Utilities, & Sub-Grade (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.58 | 1.49 | 10.3 | 63.2 | 0.11 | 0.34 | — | 0.34 | 0.33 | — | 0.33 | — | 11,387 | 11,387 | 0.46 | 0.09 | — | 11,426 |
| Dust From Material Movement | — | — | — | — | — | — | 2.07 | 2.07 | — | 0.22 | 0.22 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.15 | 0.14 | 0.98 | 6.06 | 0.01 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 1,092 | 1,092 | 0.04 | 0.01 | — | 1,096 |
| Dust From Material Movement | — | — | — | — | — | — | 0.20 | 0.20 | — | 0.02 | 0.02 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.03 | 0.18 | 1.11 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 181 | 181 | 0.01 | < 0.005 | — | 181 |
| Dust From Material Movement | — | — | — | — | — | — | 0.04 | 0.04 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.52 | 0.48 | 0.33 | 6.29 | 0.00 | 0.00 | 62.0 | 62.0 | 0.00 | 6.32 | 6.32 | — | 1,122 | 1,122 | 0.05 | 0.04 | 4.34 | 1,139 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.04 | 0.04 | 0.48 | 0.00 | 0.00 | 5.78 | 5.78 | 0.00 | 0.59 | 0.59 | — | 98.9 | 98.9 | < 0.005 | < 0.005 | 0.18 | 100 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.09 | 0.00 | 0.00 | 1.05 | 1.05 | 0.00 | 0.11 | 0.11 | — | 16.4 | 16.4 | < 0.005 | < 0.005 | 0.03 | 16.6 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.27. Linear, Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 2.11 | 1.78 | 15.4 | 21.6 | 0.03 | 0.68 | — | 0.68 | 0.62 | — | 0.62 | — | 3,240 | 3,240 | 0.13 | 0.03 | — | 3,251 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 2.11 | 1.78 | 15.4 | 21.6 | 0.03 | 0.68 | — | 0.68 | 0.62 | — | 0.62 | — | 3,240 | 3,240 | 0.13 | 0.03 | — | 3,251 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.20 | 0.17 | 1.48 | 2.07 | < 0.005 | 0.07 | — | 0.07 | 0.06 | — | 0.06 | — | 311 | 311 | 0.01 | < 0.005 | — | 312 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.03 | 0.27 | 0.38 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 51.4 | 51.4 | < 0.005 | < 0.005 | — | 51.6 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.44 | 0.41 | 0.28 | 5.35 | 0.00 | 0.00 | 52.7 | 52.7 | 0.00 | 5.37 | 5.37 | — | 953 | 953 | 0.04 | 0.03 | 3.69 | 968 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.40 | 0.36 | 0.38 | 4.21 | 0.00 | 0.00 | 52.7 | 52.7 | 0.00 | 5.37 | 5.37 | — | 858 | 858 | 0.02 | 0.03 | 0.10 | 869 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.04 | 0.04 | 0.03 | 0.41 | 0.00 | 0.00 | 4.91 | 4.91 | 0.00 | 0.50 | 0.50 | — | 84.1 | 84.1 | < 0.005 | < 0.005 | 0.15 | 85.2 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.08 | 0.00 | 0.00 | 0.90 | 0.90 | 0.00 | 0.09 | 0.09 | — | 13.9 | 13.9 | < 0.005 | < 0.005 | 0.03 | 14.1 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.28. Linear, Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.36 | 0.36 | 5.16 | 22.7 | 0.03 | 0.06 | — | 0.06 | 0.06 | — | 0.06 | — | 3,240 | 3,240 | 0.13 | 0.03 | — | 3,251 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.36 | 0.36 | 5.16 | 22.7 | 0.03 | 0.06 | — | 0.06 | 0.06 | — | 0.06 | — | 3,240 | 3,240 | 0.13 | 0.03 | — | 3,251 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.03 | 0.49 | 2.17 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 311 | 311 | 0.01 | < 0.005 | — | 312 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.09 | 0.40 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 51.4 | 51.4 | < 0.005 | < 0.005 | — | 51.6 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.44 | 0.41 | 0.28 | 5.35 | 0.00 | 0.00 | 52.7 | 52.7 | 0.00 | 5.37 | 5.37 | — | 953 | 953 | 0.04 | 0.03 | 3.69 | 968 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.40 | 0.36 | 0.38 | 4.21 | 0.00 | 0.00 | 52.7 | 52.7 | 0.00 | 5.37 | 5.37 | — | 858 | 858 | 0.02 | 0.03 | 0.10 | 869 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.03 | 0.41 | 0.00 | 0.00 | 4.91 | 4.91 | 0.00 | 0.50 | 0.50 | — | 84.1 | 84.1 | < 0.005 | < 0.005 | 0.15 | 85.2 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.08 | 0.00 | 0.00 | 0.90 | 0.90 | 0.00 | 0.09 | 0.09 | — | 13.9 | 13.9 | < 0.005 | < 0.005 | 0.03 | 14.1 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

# 4. Operations Emissions Details

## 4.10. Soil Carbon Accumulation By Vegetation Type

### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Vegetation | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

### 4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

## 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Species | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

### 4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Vegetation | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

### 4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

### 4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Species | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sequest | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

# 5. Activity Data

## 5.1. Construction Schedule

| Phase Name | Phase Type | Start Date | End Date | Days Per Week | Work Days per Phase | Phase Description |
|---|---|---|---|---|---|---|
| Site Preparation | Site Preparation | 4/1/2025 | 5/23/2025 | 5.00 | 39.0 | — |
| Grading | Grading | 5/24/2025 | 10/14/2025 | 5.00 | 102 | — |
| Building Construction | Building Construction | 10/15/2025 | 9/10/2029 | 5.00 | 1,019 | — |
| Paving | Paving | 9/11/2029 | 12/19/2029 | 5.00 | 72.0 | — |
| Architectural Coating | Architectural Coating | 12/20/2029 | 3/29/2030 | 5.00 | 72.0 | — |
| Linear, Grubbing & Land Clearing | Linear, Grubbing & Land Clearing | 4/1/2025 | 5/19/2025 | 5.00 | 35.0 | — |

| | | | | | | |
|---|---|---|---|---|---|---|
| Linear, Grading & Excavation | Linear, Grading & Excavation | 5/20/2025 | 7/7/2025 | 5.00 | 35.0 | — |
| Linear, Drainage, Utilities, & Sub-Grade | Linear, Drainage, Utilities, & Sub-Grade | 7/8/2025 | 8/25/2025 | 5.00 | 35.0 | — |
| Linear, Paving | Linear, Paving | 8/26/2025 | 10/13/2025 | 5.00 | 35.0 | — |

## 5.2. Off-Road Equipment

### 5.2.1. Unmitigated

| Phase Name | Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|---|
| Site Preparation | Rubber Tired Dozers | Diesel | Average | 3.00 | 8.00 | 367 | 0.40 |
| Site Preparation | Tractors/Loaders/Backhoes | Diesel | Average | 4.00 | 8.00 | 84.0 | 0.37 |
| Grading | Graders | Diesel | Average | 1.00 | 8.00 | 148 | 0.41 |
| Grading | Excavators | Diesel | Average | 2.00 | 8.00 | 36.0 | 0.38 |
| Grading | Tractors/Loaders/Backhoes | Diesel | Average | 2.00 | 8.00 | 84.0 | 0.37 |
| Grading | Scrapers | Diesel | Average | 2.00 | 8.00 | 423 | 0.48 |
| Grading | Rubber Tired Dozers | Diesel | Average | 1.00 | 8.00 | 367 | 0.40 |
| Building Construction | Forklifts | Diesel | Average | 3.00 | 8.00 | 82.0 | 0.20 |
| Building Construction | Generator Sets | Diesel | Average | 1.00 | 8.00 | 14.0 | 0.74 |
| Building Construction | Cranes | Diesel | Average | 1.00 | 7.00 | 367 | 0.29 |
| Building Construction | Welders | Diesel | Average | 1.00 | 8.00 | 46.0 | 0.45 |
| Building Construction | Tractors/Loaders/Backhoes | Diesel | Average | 3.00 | 7.00 | 84.0 | 0.37 |
| Paving | Pavers | Diesel | Average | 2.00 | 8.00 | 81.0 | 0.42 |
| Paving | Paving Equipment | Diesel | Average | 2.00 | 8.00 | 89.0 | 0.36 |
| Paving | Rollers | Diesel | Average | 2.00 | 8.00 | 36.0 | 0.38 |
| Architectural Coating | Air Compressors | Diesel | Average | 1.00 | 6.00 | 37.0 | 0.48 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Linear, Grubbing & Land Clearing | Signal Boards | Electric | Average | 20.0 | 8.00 | 6.00 | 0.82 |
| Linear, Grubbing & Land Clearing | Crawler Tractors | Diesel | Average | 2.00 | 8.00 | 87.0 | 0.43 |
| Linear, Grubbing & Land Clearing | Excavators | Diesel | Average | 2.00 | 8.00 | 36.0 | 0.38 |
| Linear, Grading & Excavation | Excavators | Diesel | Average | 6.00 | 8.00 | 36.0 | 0.38 |
| Linear, Grading & Excavation | Crawler Tractors | Diesel | Average | 2.00 | 8.00 | 87.0 | 0.43 |
| Linear, Grading & Excavation | Graders | Diesel | Average | 2.00 | 8.00 | 148 | 0.41 |
| Linear, Grading & Excavation | Rollers | Diesel | Average | 4.00 | 8.00 | 36.0 | 0.38 |
| Linear, Grading & Excavation | Signal Boards | Electric | Average | 20.0 | 8.00 | 6.00 | 0.82 |
| Linear, Grading & Excavation | Tractors/Loaders/Backhoes | Diesel | Average | 4.00 | 8.00 | 84.0 | 0.37 |
| Linear, Grading & Excavation | Rubber Tired Loaders | Diesel | Average | 2.00 | 8.00 | 150 | 0.36 |
| Linear, Grading & Excavation | Scrapers | Diesel | Average | 4.00 | 8.00 | 423 | 0.48 |
| Linear, Drainage, Utilities, & Sub-Grade | Scrapers | Diesel | Average | 4.00 | 8.00 | 423 | 0.48 |
| Linear, Drainage, Utilities, & Sub-Grade | Rough Terrain Forklifts | Diesel | Average | 2.00 | 8.00 | 96.0 | 0.40 |
| Linear, Drainage, Utilities, & Sub-Grade | Signal Boards | Electric | Average | 20.0 | 8.00 | 6.00 | 0.82 |
| Linear, Drainage, Utilities, & Sub-Grade | Tractors/Loaders/Backhoes | Diesel | Average | 4.00 | 8.00 | 84.0 | 0.37 |
| Linear, Drainage, Utilities, & Sub-Grade | Graders | Diesel | Average | 2.00 | 8.00 | 148 | 0.41 |
| Linear, Drainage, Utilities, & Sub-Grade | Plate Compactors | Diesel | Average | 2.00 | 8.00 | 8.00 | 0.43 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Linear, Drainage, Utilities, & Sub-Grade | Pumps | Diesel | Average | 2.00 | 8.00 | 11.0 | 0.74 |
| Linear, Drainage, Utilities, & Sub-Grade | Air Compressors | Diesel | Average | 2.00 | 8.00 | 37.0 | 0.48 |
| Linear, Drainage, Utilities, & Sub-Grade | Generator Sets | Diesel | Average | 2.00 | 8.00 | 14.0 | 0.74 |
| Linear, Paving | Rollers | Diesel | Average | 6.00 | 8.00 | 36.0 | 0.38 |
| Linear, Paving | Paving Equipment | Diesel | Average | 2.00 | 8.00 | 89.0 | 0.36 |
| Linear, Paving | Pavers | Diesel | Average | 2.00 | 8.00 | 81.0 | 0.42 |
| Linear, Paving | Tractors/Loaders/Backhoes | Diesel | Average | 4.00 | 8.00 | 84.0 | 0.37 |
| Linear, Paving | Signal Boards | Electric | Average | 20.0 | 8.00 | 6.00 | 0.82 |

### 5.2.2. Mitigated

| Phase Name | Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|---|
| Site Preparation | Rubber Tired Dozers | Diesel | Tier 4 Final | 3.00 | 8.00 | 367 | 0.40 |
| Site Preparation | Tractors/Loaders/Backhoes | Diesel | Tier 4 Final | 4.00 | 8.00 | 84.0 | 0.37 |
| Grading | Graders | Diesel | Tier 4 Final | 1.00 | 8.00 | 148 | 0.41 |
| Grading | Excavators | Diesel | Tier 4 Final | 2.00 | 8.00 | 36.0 | 0.38 |
| Grading | Tractors/Loaders/Backhoes | Diesel | Tier 4 Final | 2.00 | 8.00 | 84.0 | 0.37 |
| Grading | Scrapers | Diesel | Tier 4 Final | 2.00 | 8.00 | 423 | 0.48 |
| Grading | Rubber Tired Dozers | Diesel | Tier 4 Final | 1.00 | 8.00 | 367 | 0.40 |
| Building Construction | Forklifts | Diesel | Tier 4 Final | 3.00 | 8.00 | 82.0 | 0.20 |
| Building Construction | Generator Sets | Diesel | Average | 1.00 | 8.00 | 14.0 | 0.74 |
| Building Construction | Cranes | Diesel | Tier 4 Final | 1.00 | 7.00 | 367 | 0.29 |
| Building Construction | Welders | Diesel | Tier 4 Final | 1.00 | 8.00 | 46.0 | 0.45 |
| Building Construction | Tractors/Loaders/Backhoes | Diesel | Tier 4 Final | 3.00 | 7.00 | 84.0 | 0.37 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Paving | Pavers | Diesel | Tier 4 Final | 2.00 | 8.00 | 81.0 | 0.42 |
| Paving | Paving Equipment | Diesel | Tier 4 Final | 2.00 | 8.00 | 89.0 | 0.36 |
| Paving | Rollers | Diesel | Tier 4 Final | 2.00 | 8.00 | 36.0 | 0.38 |
| Architectural Coating | Air Compressors | Diesel | Tier 4 Final | 1.00 | 6.00 | 37.0 | 0.48 |
| Linear, Grubbing & Land Clearing | Signal Boards | Electric | Average | 20.0 | 8.00 | 6.00 | 0.82 |
| Linear, Grubbing & Land Clearing | Crawler Tractors | Diesel | Tier 4 Final | 2.00 | 8.00 | 87.0 | 0.43 |
| Linear, Grubbing & Land Clearing | Excavators | Diesel | Tier 4 Final | 2.00 | 8.00 | 36.0 | 0.38 |
| Linear, Grading & Excavation | Excavators | Diesel | Tier 4 Final | 6.00 | 8.00 | 36.0 | 0.38 |
| Linear, Grading & Excavation | Crawler Tractors | Diesel | Tier 4 Final | 2.00 | 8.00 | 87.0 | 0.43 |
| Linear, Grading & Excavation | Graders | Diesel | Tier 4 Final | 2.00 | 8.00 | 148 | 0.41 |
| Linear, Grading & Excavation | Rollers | Diesel | Tier 4 Final | 4.00 | 8.00 | 36.0 | 0.38 |
| Linear, Grading & Excavation | Signal Boards | Electric | Average | 20.0 | 8.00 | 6.00 | 0.82 |
| Linear, Grading & Excavation | Tractors/Loaders/Backhoes | Diesel | Tier 4 Final | 4.00 | 8.00 | 84.0 | 0.37 |
| Linear, Grading & Excavation | Rubber Tired Loaders | Diesel | Tier 4 Final | 2.00 | 8.00 | 150 | 0.36 |
| Linear, Grading & Excavation | Scrapers | Diesel | Tier 4 Final | 4.00 | 8.00 | 423 | 0.48 |
| Linear, Drainage, Utilities, & Sub-Grade | Scrapers | Diesel | Tier 4 Final | 4.00 | 8.00 | 423 | 0.48 |
| Linear, Drainage, Utilities, & Sub-Grade | Rough Terrain Forklifts | Diesel | Tier 4 Final | 2.00 | 8.00 | 96.0 | 0.40 |
| Linear, Drainage, Utilities, & Sub-Grade | Signal Boards | Electric | Average | 20.0 | 8.00 | 6.00 | 0.82 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Linear, Drainage, Utilities, & Sub-Grade | Tractors/Loaders/Backhoes | Diesel | Tier 4 Final | 4.00 | 8.00 | 84.0 | 0.37 |
| Linear, Drainage, Utilities, & Sub-Grade | Graders | Diesel | Tier 4 Final | 2.00 | 8.00 | 148 | 0.41 |
| Linear, Drainage, Utilities, & Sub-Grade | Plate Compactors | Diesel | Average | 2.00 | 8.00 | 8.00 | 0.43 |
| Linear, Drainage, Utilities, & Sub-Grade | Pumps | Diesel | Average | 2.00 | 8.00 | 11.0 | 0.74 |
| Linear, Drainage, Utilities, & Sub-Grade | Air Compressors | Diesel | Tier 4 Final | 2.00 | 8.00 | 37.0 | 0.48 |
| Linear, Drainage, Utilities, & Sub-Grade | Generator Sets | Diesel | Average | 2.00 | 8.00 | 14.0 | 0.74 |
| Linear, Paving | Rollers | Diesel | Tier 4 Final | 6.00 | 8.00 | 36.0 | 0.38 |
| Linear, Paving | Paving Equipment | Diesel | Tier 4 Final | 2.00 | 8.00 | 89.0 | 0.36 |
| Linear, Paving | Pavers | Diesel | Tier 4 Final | 2.00 | 8.00 | 81.0 | 0.42 |
| Linear, Paving | Tractors/Loaders/Backhoes | Diesel | Tier 4 Final | 4.00 | 8.00 | 84.0 | 0.37 |
| Linear, Paving | Signal Boards | Electric | Average | 20.0 | 8.00 | 6.00 | 0.82 |

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Site Preparation | — | — | — | — |
| Site Preparation | Worker | 17.5 | 14.3 | LDA,LDT1,LDT2 |
| Site Preparation | Vendor | — | 8.80 | HHDT,MHDT |
| Site Preparation | Hauling | 0.00 | 20.0 | HHDT |
| Site Preparation | Onsite truck | — | — | HHDT |
| Grading | — | — | — | — |
| Grading | Worker | 20.0 | 14.3 | LDA,LDT1,LDT2 |

| | | | | |
|---|---|---|---|---|
| Grading | Vendor | — | 8.80 | HHDT,MHDT |
| Grading | Hauling | 0.00 | 20.0 | HHDT |
| Grading | Onsite truck | — | — | HHDT |
| Building Construction | — | — | — | — |
| Building Construction | Worker | 197 | 14.3 | LDA,LDT1,LDT2 |
| Building Construction | Vendor | 64.1 | 8.80 | HHDT,MHDT |
| Building Construction | Hauling | 0.00 | 20.0 | HHDT |
| Building Construction | Onsite truck | — | — | HHDT |
| Paving | — | — | — | — |
| Paving | Worker | 15.0 | 14.3 | LDA,LDT1,LDT2 |
| Paving | Vendor | — | 8.80 | HHDT,MHDT |
| Paving | Hauling | 0.00 | 20.0 | HHDT |
| Paving | Onsite truck | — | — | HHDT |
| Architectural Coating | — | — | — | — |
| Architectural Coating | Worker | 39.4 | 14.3 | LDA,LDT1,LDT2 |
| Architectural Coating | Vendor | — | 8.80 | HHDT,MHDT |
| Architectural Coating | Hauling | 0.00 | 20.0 | HHDT |
| Architectural Coating | Onsite truck | — | — | HHDT |
| Linear, Grubbing & Land Clearing | — | — | — | — |
| Linear, Grubbing & Land Clearing | Worker | 60.0 | 14.3 | LDA,LDT1,LDT2 |
| Linear, Grubbing & Land Clearing | Vendor | 0.00 | 8.80 | HHDT,MHDT |
| Linear, Grubbing & Land Clearing | Hauling | 0.00 | 20.0 | HHDT |
| Linear, Grubbing & Land Clearing | Onsite truck | — | — | HHDT |
| Linear, Grading & Excavation | — | — | — | — |
| Linear, Grading & Excavation | Worker | 110 | 14.3 | LDA,LDT1,LDT2 |
| Linear, Grading & Excavation | Vendor | 2.00 | 8.80 | HHDT,MHDT |
| Linear, Grading & Excavation | Hauling | 0.00 | 20.0 | HHDT |

| | | | | |
|---|---|---|---|---|
| Linear, Grading & Excavation | Onsite truck | — | — | HHDT |
| Linear, Drainage, Utilities, & Sub-Grade | — | — | — | — |
| Linear, Drainage, Utilities, & Sub-Grade | Worker | 100 | 14.3 | LDA,LDT1,LDT2 |
| Linear, Drainage, Utilities, & Sub-Grade | Vendor | 0.00 | 8.80 | HHDT,MHDT |
| Linear, Drainage, Utilities, & Sub-Grade | Hauling | 0.00 | 20.0 | HHDT |
| Linear, Drainage, Utilities, & Sub-Grade | Onsite truck | — | — | HHDT |
| Linear, Paving | — | — | — | — |
| Linear, Paving | Worker | 85.0 | 14.3 | LDA,LDT1,LDT2 |
| Linear, Paving | Vendor | 0.00 | 8.80 | HHDT,MHDT |
| Linear, Paving | Hauling | 0.00 | 20.0 | HHDT |
| Linear, Paving | Onsite truck | — | — | HHDT |

### 5.3.2. Mitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Site Preparation | — | — | — | — |
| Site Preparation | Worker | 17.5 | 14.3 | LDA,LDT1,LDT2 |
| Site Preparation | Vendor | — | 8.80 | HHDT,MHDT |
| Site Preparation | Hauling | 0.00 | 20.0 | HHDT |
| Site Preparation | Onsite truck | — | — | HHDT |
| Grading | — | — | — | — |
| Grading | Worker | 20.0 | 14.3 | LDA,LDT1,LDT2 |
| Grading | Vendor | — | 8.80 | HHDT,MHDT |
| Grading | Hauling | 0.00 | 20.0 | HHDT |
| Grading | Onsite truck | — | — | HHDT |
| Building Construction | — | — | — | — |
| Building Construction | Worker | 197 | 14.3 | LDA,LDT1,LDT2 |
| Building Construction | Vendor | 64.1 | 8.80 | HHDT,MHDT |

| | | | | |
|---|---|---|---|---|
| Building Construction | Hauling | 0.00 | 20.0 | HHDT |
| Building Construction | Onsite truck | — | — | HHDT |
| Paving | — | — | — | — |
| Paving | Worker | 15.0 | 14.3 | LDA,LDT1,LDT2 |
| Paving | Vendor | — | 8.80 | HHDT,MHDT |
| Paving | Hauling | 0.00 | 20.0 | HHDT |
| Paving | Onsite truck | — | — | HHDT |
| Architectural Coating | — | — | — | — |
| Architectural Coating | Worker | 39.4 | 14.3 | LDA,LDT1,LDT2 |
| Architectural Coating | Vendor | — | 8.80 | HHDT,MHDT |
| Architectural Coating | Hauling | 0.00 | 20.0 | HHDT |
| Architectural Coating | Onsite truck | — | — | HHDT |
| Linear, Grubbing & Land Clearing | — | — | — | — |
| Linear, Grubbing & Land Clearing | Worker | 60.0 | 14.3 | LDA,LDT1,LDT2 |
| Linear, Grubbing & Land Clearing | Vendor | 0.00 | 8.80 | HHDT,MHDT |
| Linear, Grubbing & Land Clearing | Hauling | 0.00 | 20.0 | HHDT |
| Linear, Grubbing & Land Clearing | Onsite truck | — | — | HHDT |
| Linear, Grading & Excavation | — | — | — | — |
| Linear, Grading & Excavation | Worker | 110 | 14.3 | LDA,LDT1,LDT2 |
| Linear, Grading & Excavation | Vendor | 2.00 | 8.80 | HHDT,MHDT |
| Linear, Grading & Excavation | Hauling | 0.00 | 20.0 | HHDT |
| Linear, Grading & Excavation | Onsite truck | — | — | HHDT |
| Linear, Drainage, Utilities, & Sub-Grade | — | — | — | — |
| Linear, Drainage, Utilities, & Sub-Grade | Worker | 100 | 14.3 | LDA,LDT1,LDT2 |
| Linear, Drainage, Utilities, & Sub-Grade | Vendor | 0.00 | 8.80 | HHDT,MHDT |
| Linear, Drainage, Utilities, & Sub-Grade | Hauling | 0.00 | 20.0 | HHDT |
| Linear, Drainage, Utilities, & Sub-Grade | Onsite truck | — | — | HHDT |

| | | | | |
|---|---|---|---|---|
| Linear, Paving | — | — | — | — |
| Linear, Paving | Worker | 85.0 | 14.3 | LDA,LDT1,LDT2 |
| Linear, Paving | Vendor | 0.00 | 8.80 | HHDT,MHDT |
| Linear, Paving | Hauling | 0.00 | 20.0 | HHDT |
| Linear, Paving | Onsite truck | — | — | HHDT |

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

| Phase Name | Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|---|
| Architectural Coating | 1,496,576 | 498,859 | 215,622 | 71,874 | — |

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

| Phase Name | Material Imported (cy) | Material Exported (cy) | Acres Graded (acres) | Material Demolished (sq. ft.) | Acres Paved (acres) |
|---|---|---|---|---|---|
| Site Preparation | — | — | 58.5 | 0.00 | — |
| Grading | — | — | 306 | 0.00 | — |
| Paving | 0.00 | 0.00 | 0.00 | 0.00 | 69.8 |
| Linear, Grubbing & Land Clearing | — | — | 65.7 | 0.00 | — |
| Linear, Grading & Excavation | — | — | 65.7 | 0.00 | — |
| Linear, Drainage, Utilities, & Sub-Grade | — | — | 65.7 | 0.00 | — |

### 5.6.2. Construction Earthmoving Control Strategies

| Control Strategies Applied | Frequency (per day) | PM10 Reduction | PM2.5 Reduction |
|---|---|---|---|
| Water Exposed Area | 2 | 61% | 61% |

## 5.7. Construction Paving

| Land Use | Area Paved (acres) | % Asphalt |
|---|---|---|
| Single Family Housing | 0.20 | 0% |
| Single Family Housing | 3.98 | 0% |
| Health Club | 0.00 | 0% |
| City Park | 0.00 | 0% |
| City Park | 0.00 | 0% |
| City Park | 0.00 | 0% |
| Road Construction | 31.5 | 100% |
| Road Construction | 34.2 | 100% |

## 5.8. Construction Electricity Consumption and Emissions Factors

### kWh per Year and Emission Factor (lb/MWh)

| Year | kWh per Year | CO2 | CH4 | N2O |
|---|---|---|---|---|
| 2025 | 2,348 | 204 | 0.03 | < 0.005 |
| 2026 | 0.00 | 204 | 0.03 | < 0.005 |
| 2027 | 0.00 | 204 | 0.03 | < 0.005 |
| 2028 | 0.00 | 204 | 0.03 | < 0.005 |
| 2029 | 0.00 | 204 | 0.03 | < 0.005 |
| 2030 | 0.00 | 204 | 0.03 | < 0.005 |

# 5.18. Vegetation

## 5.18.1. Land Use Change

### 5.18.1.1. Unmitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
|---|---|---|---|

### 5.18.1.2. Mitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
|---|---|---|---|

## 5.18.1. Biomass Cover Type

### 5.18.1.1. Unmitigated

| Biomass Cover Type | Initial Acres | Final Acres |
|---|---|---|

### 5.18.1.2. Mitigated

| Biomass Cover Type | Initial Acres | Final Acres |
|---|---|---|

## 5.18.2. Sequestration

### 5.18.2.1. Unmitigated

| Tree Type | Number | Electricity Saved (kWh/year) | Natural Gas Saved (btu/year) |
|---|---|---|---|

### 5.18.2.2. Mitigated

| Tree Type | Number | Electricity Saved (kWh/year) | Natural Gas Saved (btu/year) |
|---|---|---|---|

# 6. Climate Risk Detailed Report

## 6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

| Climate Hazard | Result for Project Location | Unit |
|---|---|---|
| Temperature and Extreme Heat | 31.2 | annual days of extreme heat |
| Extreme Precipitation | 9.95 | annual days with precipitation above 20 mm |
| Sea Level Rise | — | meters of inundation depth |
| Wildfire | 16.6 | annual hectares burned |

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

## 6.2. Initial Climate Risk Scores

| Climate Hazard | Exposure Score | Sensitivity Score | Adaptive Capacity Score | Vulnerability Score |
|---|---|---|---|---|
| Temperature and Extreme Heat | N/A | N/A | N/A | N/A |
| Extreme Precipitation | 2 | 0 | 0 | N/A |
| Sea Level Rise | N/A | N/A | N/A | N/A |
| Wildfire | 1 | 0 | 0 | N/A |
| Flooding | N/A | N/A | N/A | N/A |
| Drought | N/A | N/A | N/A | N/A |
| Snowpack Reduction | 0 | 0 | 0 | N/A |

| | | | | |
|---|---|---|---|---|
| Air Quality Degradation | N/A | N/A | N/A | N/A |

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

## 6.3. Adjusted Climate Risk Scores

| Climate Hazard | Exposure Score | Sensitivity Score | Adaptive Capacity Score | Vulnerability Score |
|---|---|---|---|---|
| Temperature and Extreme Heat | N/A | N/A | N/A | N/A |
| Extreme Precipitation | 2 | 1 | 1 | 3 |
| Sea Level Rise | N/A | N/A | N/A | N/A |
| Wildfire | 1 | 1 | 1 | 2 |
| Flooding | N/A | N/A | N/A | N/A |
| Drought | N/A | N/A | N/A | N/A |
| Snowpack Reduction | 1 | 1 | 1 | 2 |
| Air Quality Degradation | N/A | N/A | N/A | N/A |

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

## 6.4. Climate Risk Reduction Measures

# 7. Health and Equity Details

## 7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

| Indicator | Result for Project Census Tract |
|---|---|
| Exposure Indicators | — |

| | |
|---|---|
| AQ-Ozone | 75.1 |
| AQ-PM | 14.1 |
| AQ-DPM | 12.2 |
| Drinking Water | 15.7 |
| Lead Risk Housing | 1.95 |
| Pesticides | 27.4 |
| Toxic Releases | 13.2 |
| Traffic | 15.6 |
| Effect Indicators | — |
| CleanUp Sites | 50.3 |
| Groundwater | 0.00 |
| Haz Waste Facilities/Generators | 19.2 |
| Impaired Water Bodies | 12.5 |
| Solid Waste | 2.52 |
| Sensitive Population | — |
| Asthma | 7.33 |
| Cardio-vascular | 25.7 |
| Low Birth Weights | 0.23 |
| Socioeconomic Factor Indicators | — |
| Education | 2.30 |
| Housing | 2.43 |
| Linguistic | 0.92 |
| Poverty | 3.54 |
| Unemployment | 26.9 |

## 7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

| Indicator | Result for Project Census Tract |
|---|---|
| Economic | — |
| Above Poverty | 99.08892596 |
| Employed | 79.81521879 |
| Median HI | 93.40433723 |
| Education | — |
| Bachelor's or higher | 84.10111639 |
| High school enrollment | 100 |
| Preschool enrollment | 21.10868728 |
| Transportation | — |
| Auto Access | 90.86359553 |
| Active commuting | 57.71846529 |
| Social | — |
| 2-parent households | 98.53714872 |
| Voting | 94.81586039 |
| Neighborhood | — |
| Alcohol availability | 88.14320544 |
| Park access | 39.61247273 |
| Retail density | 15.95021173 |
| Supermarket access | 26.3826511 |
| Tree canopy | 94.66187604 |
| Housing | — |
| Homeownership | 99.28140639 |
| Housing habitability | 99.97433594 |
| Low-inc homeowner severe housing cost burden | 94.52072373 |
| Low-inc renter severe housing cost burden | 99.08892596 |
| Uncrowded housing | 96.93314513 |

| | |
|---|---|
| Health Outcomes | — |
| Insured adults | 97.11279353 |
| Arthritis | 0.0 |
| Asthma ER Admissions | 91.3 |
| High Blood Pressure | 0.0 |
| Cancer (excluding skin) | 0.0 |
| Asthma | 0.0 |
| Coronary Heart Disease | 0.0 |
| Chronic Obstructive Pulmonary Disease | 0.0 |
| Diagnosed Diabetes | 0.0 |
| Life Expectancy at Birth | 75.2 |
| Cognitively Disabled | 98.4 |
| Physically  Disabled | 98.6 |
| Heart Attack ER Admissions | 77.2 |
| Mental Health Not Good | 0.0 |
| Chronic Kidney Disease | 0.0 |
| Obesity | 0.0 |
| Pedestrian Injuries | 19.6 |
| Physical Health Not Good | 0.0 |
| Stroke | 0.0 |
| Health Risk Behaviors | — |
| Binge Drinking | 0.0 |
| Current Smoker | 0.0 |
| No Leisure Time for Physical Activity | 0.0 |
| Climate Change Exposures | — |
| Wildfire Risk | 0.0 |
| SLR Inundation Area | 0.0 |

| | |
|---|---|
| Children | 55.0 |
| Elderly | 47.3 |
| English Speaking | 72.5 |
| Foreign-born | 6.2 |
| Outdoor Workers | 65.6 |
| Climate Change Adaptive Capacity | — |
| Impervious Surface Cover | 90.5 |
| Traffic Density | 17.6 |
| Traffic Access | 0.0 |
| Other Indices | — |
| Hardship | 7.2 |
| Other Decision Support | — |
| 2016 Voting | 97.6 |

## 7.3. Overall Health & Equity Scores

| Metric | Result for Project Census Tract |
|---|---|
| CalEnviroScreen 4.0 Score for Project Location (a) | 0.00 |
| Healthy Places Index Score for Project Location (b) | 95.0 |
| Project Located in a Designated Disadvantaged Community (Senate Bill 535) | No |
| Project Located in a Low-Income Community (Assembly Bill 1550) | No |
| Project Located in a Community Air Protection Program Community (Assembly Bill 617) | No |

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

## 7.4. Health & Equity Measures

No Health & Equity Measures selected.

## 7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

## 7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

# 8. User Changes to Default Data

| Screen | Justification |
|---|---|
| Land Use | PD |
| Construction: Construction Phases | 5 year buildout starting in April 2025 |
| Construction: Architectural Coatings | El dorado VOC limit: 100 g/L for flat, 50 for nonflat |

1. Basic Project Information

1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | Green Valley Operations |
| Operational Year | 2031 |
| Lead Agency | |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 2.3 |
| Precipitation (days) | 10.4 |
| Location | 38.70441380881826, -121.04878050363874 |
| County | El Dorado-Mountain County |
| City | Unincorporated |
| Air District | El Dorado County AQMD |
| Air Basin | Mountain Counties |
| TAZ | 400 |
| EDFZ | 4 |
| Electric Utility | Pacific Gas & Electric Company |
| Gas Utility | Pacific Gas & Electric |
| App Version | 2022.1.1.22 |

1.2. Land Use Types

| Land Use Subtype | Size | Unit | Lot Acreage | Building Area (sq ft) | Landscape Area (sq ft) | Special Landscape Area (sq ft) | Population | Description |
|---|---|---|---|---|---|---|---|---|
| Single Family Housing | 18 | Dwelling Unit | 5 | 35100 | 210831 | | 46 | LDR |
| Single Family Housing | 361 | Dwelling Unit | 171 | 703950 | 4228341 | | 917 | HDR |
| Health Club | 144 | 1000sqft | 3.3 | 143748 | | | | Clubhouse |
| City Park | 4 | Acre | 4 | 0 | | | | Public Facility (Lot A) |

1.3. User-Selected Emission Reduction Measures by Emissions Sector

| Sector | # | Measure Title |
|---|---|---|
| Energy | E-15 | Require All-Electric Development |

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

| Un/Mit. | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Unmit. | 16.6 | 36.7 | 15.2 | 98.6 | 0.19 | 0.77 | 145 | 146 | 0.76 | 16.4 | 17.2 | 595 | 27170 | 27765 | 61.2 | 0.82 | 38.3 | 29580 |
| Mit. | 16.3 | 36.6 | 12.4 | 97.4 | 0.18 | 0.54 | 145 | 146 | 0.53 | 16.4 | 16.9 | 595 | 23641 | 24236 | 60.9 | 0.82 | 38.3 | 26041 |
| % Reduced | 1.96 | 0.44 | 18.4 | 1.2 | 9.18 | 29.2 | | 0.15 | 29.7 | | 1.31 | | 13 | 12.7 | 0.51 | 0.8 | | 12 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Unmit. | 12.4 | 32.6 | 16 | 67.3 | 0.18 | 0.75 | 145 | 146 | 0.74 | 16.4 | 17.1 | 595 | 26065 | 26661 | 61.4 | 0.89 | 6.82 | 28465 |
| Mit. | 12 | 32.5 | 13.2 | 66.1 | 0.16 | 0.52 | 145 | 146 | 0.52 | 16.4 | 16.9 | 595 | 22537 | 23132 | 61 | 0.88 | 6.82 | 24926 |
| % Reduced | 2.63 | 0.5 | 17.4 | 1.76 | 9.75 | 30.1 | | 0.15 | 30.3 | | 1.31 | | 13.5 | 13.2 | 0.51 | 0.74 | | 12.4 |
| Average Daily (Max) | | | | | | | | | | | | | | | | | | |
| Unmit. | 13.6 | 34 | 13.1 | 78.2 | 0.17 | 0.54 | 141 | 142 | 0.53 | 16 | 16.5 | 595 | 22900 | 23496 | 61.2 | 0.86 | 19.9 | 25302 |
| Mit. | 13.3 | 33.8 | 10.3 | 77 | 0.15 | 0.32 | 141 | 142 | 0.31 | 16 | 16.3 | 595 | 19372 | 19967 | 60.9 | 0.85 | 19.9 | 21763 |
| % Reduced | 2.39 | 0.48 | 21.3 | 1.51 | 10.6 | 41.5 | | 0.16 | 42.2 | | 1.36 | | 15.4 | 15 | 0.51 | 0.77 | | 14 |
| Annual (Max) | | | | | | | | | | | | | | | | | | |
| Unmit. | 2.48 | 6.2 | 2.39 | 14.3 | 0.03 | 0.1 | 25.8 | 25.9 | 0.1 | 2.92 | 3.02 | 98.5 | 3791 | 3890 | 10.1 | 0.14 | 3.3 | 4189 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mit. | | 2.43 | 6.17 | 1.88 | 14.1 | 0.03 | 0.06 | 25.8 | 25.8 | 0.06 | 2.92 | 2.98 | 98.5 | 3207 | 3306 | 10.1 | 0.14 | 3.3 | 3603 |
| % Reduced | | 2.39 | 0.48 | 21.3 | 1.51 | 10.6 | 41.5 | | 0.16 | 42.2 | | 1.36 | | 15.4 | 15 | 0.51 | 0.77 | | 14 |

2.5. Operations Emissions by Sector, Unmitigated

| Sector | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Mobile | | 12.6 | 12 | 7.06 | 66.7 | 0.14 | 0.12 | 145 | 145 | 0.12 | 16.4 | 16.5 | | 14530 | 14530 | 0.65 | 0.65 | 32.3 | 14774 |
| Area | | 3.48 | 24.5 | 3.71 | 29.3 | 0.02 | 0.3 | | 0.3 | 0.3 | | 0.3 | 0 | 4472 | 4472 | 0.09 | 0.01 | | 4477 |
| Energy | | 0.5 | 0.25 | 4.38 | 2.53 | 0.03 | 0.35 | | 0.35 | 0.35 | | 0.35 | | 8079 | 8079 | 0.91 | 0.06 | | 8120 |
| Water | | | | | | | | | | | | | 39.5 | 88.6 | 128 | 4.07 | 0.1 | | 259 |
| Waste | | | | | | | | | | | | | 556 | 0 | 556 | 55.5 | 0 | | 1944 |
| Refrig. | | | | | | | | | | | | | | | | | | 5.98 | 5.98 |
| Total | | 16.6 | 36.7 | 15.2 | 98.6 | 0.19 | 0.77 | 145 | 146 | 0.76 | 16.4 | 17.2 | 595 | 27170 | 27765 | 61.2 | 0.82 | 38.3 | 29580 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | | |
| Mobile | | 11.5 | 10.8 | 8.18 | 63.3 | 0.13 | 0.12 | 145 | 145 | 0.12 | 16.4 | 16.5 | | 13509 | 13509 | 0.76 | 0.72 | 0.84 | 13742 |
| Area | | 0.4 | 21.6 | 3.46 | 1.47 | 0.02 | 0.28 | | 0.28 | 0.28 | | 0.28 | 0 | 4389 | 4389 | 0.08 | 0.01 | | 4394 |
| Energy | | 0.5 | 0.25 | 4.38 | 2.53 | 0.03 | 0.35 | | 0.35 | 0.35 | | 0.35 | | 8079 | 8079 | 0.91 | 0.06 | | 8120 |
| Water | | | | | | | | | | | | | 39.5 | 88.6 | 128 | 4.07 | 0.1 | | 259 |
| Waste | | | | | | | | | | | | | 556 | 0 | 556 | 55.5 | 0 | | 1944 |
| Refrig. | | | | | | | | | | | | | | | | | | 5.98 | 5.98 |
| Total | | 12.4 | 32.6 | 16 | 67.3 | 0.18 | 0.75 | 145 | 146 | 0.74 | 16.4 | 17.1 | 595 | 26065 | 26661 | 61.4 | 0.89 | 6.82 | 28465 |
| Average Daily | | | | | | | | | | | | | | | | | | | |
| Mobile | | 11.5 | 10.8 | 7.81 | 61.6 | 0.13 | 0.12 | 141 | 141 | 0.12 | 16 | 16.1 | | 13706 | 13706 | 0.72 | 0.69 | 13.9 | 13944 |
| Area | | 1.61 | 22.9 | 0.9 | 14.1 | 0.01 | 0.07 | | 0.07 | 0.07 | | 0.07 | 0 | 1027 | 1027 | 0.02 | < 0.005 | | 1028 |
| Energy | | 0.5 | 0.25 | 4.38 | 2.53 | 0.03 | 0.35 | | 0.35 | 0.35 | | 0.35 | | 8079 | 8079 | 0.91 | 0.06 | | 8120 |
| Water | | | | | | | | | | | | | 39.5 | 88.6 | 128 | 4.07 | 0.1 | | 259 |
| Waste | | | | | | | | | | | | | 556 | 0 | 556 | 55.5 | 0 | | 1944 |
| Refrig. | | | | | | | | | | | | | | | | | | 5.98 | 5.98 |
| Total | | 13.6 | 34 | 13.1 | 78.2 | 0.17 | 0.54 | 141 | 142 | 0.53 | 16 | 16.5 | 595 | 22900 | 23496 | 61.2 | 0.86 | 19.9 | 25302 |
| Annual | | | | | | | | | | | | | | | | | | | |
| Mobile | | 2.1 | 1.98 | 1.43 | 11.2 | 0.02 | 0.02 | 25.8 | 25.8 | 0.02 | 2.92 | 2.94 | | 2269 | 2269 | 0.12 | 0.11 | 2.31 | 2309 |
| Area | | 0.29 | 4.18 | 0.16 | 2.57 | < 0.005 | 0.01 | | 0.01 | 0.01 | | 0.01 | 0 | 170 | 170 | < 0.005 | < 0.005 | | 170 |
| Energy | | 0.09 | 0.05 | 0.8 | 0.46 | < 0.005 | 0.06 | | 0.06 | 0.06 | | 0.06 | | 1338 | 1338 | 0.15 | 0.01 | | 1344 |
| Water | | | | | | | | | | | | | 6.54 | 14.7 | 21.2 | 0.67 | 0.02 | | 42.9 |
| Waste | | | | | | | | | | | | | 92 | 0 | 92 | 9.19 | 0 | | 322 |
| Refrig. | | | | | | | | | | | | | | | | | | 0.99 | 0.99 |
| Total | | 2.48 | 6.2 | 2.39 | 14.3 | 0.03 | 0.1 | 25.8 | 25.9 | 0.1 | 2.92 | 3.02 | 98.5 | 3791 | 3890 | 10.1 | 0.14 | 3.3 | 4189 |

2.6. Operations Emissions by Sector, Mitigated

| Sector | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Mobile | | 12.6 | 12 | 7.06 | 66.7 | 0.14 | 0.12 | 145 | 145 | 0.12 | 16.4 | 16.5 | | 14530 | 14530 | 0.65 | 0.65 | 32.3 | 14774 |
| Area | | 3.48 | 24.5 | 3.71 | 29.3 | 0.02 | 0.3 | | 0.3 | 0.3 | | 0.3 | 0 | 4472 | 4472 | 0.09 | 0.01 | | 4477 |
| Energy | | 0.18 | 0.09 | 1.6 | 1.34 | 0.01 | 0.12 | | 0.12 | 0.12 | | 0.12 | | 4550 | 4550 | 0.6 | 0.06 | | 4582 |
| Water | | | | | | | | | | | | | 39.5 | 88.6 | 128 | 4.07 | 0.1 | | 259 |
| Waste | | | | | | | | | | | | | 556 | 0 | 556 | 55.5 | 0 | | 1944 |
| Refrig. | | | | | | | | | | | | | | | | | | 5.98 | 5.98 |
| Total | | 16.3 | 36.6 | 12.4 | 97.4 | 0.18 | 0.54 | 145 | 146 | 0.53 | 16.4 | 16.9 | 595 | 23641 | 24236 | 60.9 | 0.82 | 38.3 | 26041 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | | |
| Mobile | | 11.5 | 10.8 | 8.18 | 63.3 | 0.13 | 0.12 | 145 | 145 | 0.12 | 16.4 | 16.5 | | 13509 | 13509 | 0.76 | 0.72 | 0.84 | 13742 |
| Area | | 0.4 | 21.6 | 3.46 | 1.47 | 0.02 | 0.28 | | 0.28 | 0.28 | | 0.28 | 0 | 4389 | 4389 | 0.08 | 0.01 | | 4394 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy | 0.18 | 0.09 | 1.6 | 1.34 | 0.01 | 0.12 | | 0.12 | 0.12 | | 0.12 | | 4550 | 4550 | 0.6 | 0.06 | | 4582 |
| Water | | | | | | | | | | | | 39.5 | 88.6 | 128 | 4.07 | 0.1 | | 259 |
| Waste | | | | | | | | | | | | 556 | 0 | 556 | 55.5 | 0 | | 1944 |
| Refrig. | | | | | | | | | | | | | | | | | 5.98 | 5.98 |
| Total | 12 | 32.5 | 13.2 | 66.1 | 0.16 | 0.52 | 145 | 146 | 0.52 | 16.4 | 16.9 | 595 | 22537 | 23132 | 61 | 0.88 | 6.82 | 24926 |
| Average Daily | | | | | | | | | | | | | | | | | | |
| Mobile | 11.5 | 10.8 | 7.81 | 61.6 | 0.13 | 0.12 | 141 | 141 | 0.12 | 16 | 16.1 | | 13706 | 13706 | 0.72 | 0.69 | 13.9 | 13944 |
| Area | 1.61 | 22.9 | 0.9 | 14.1 | 0.01 | 0.07 | | 0.07 | 0.07 | | 0.07 | 0 | 1027 | 1027 | 0.02 | < 0.005 | | 1028 |
| Energy | 0.18 | 0.09 | 1.6 | 1.34 | 0.01 | 0.12 | | 0.12 | 0.12 | | 0.12 | | 4550 | 4550 | 0.6 | 0.06 | | 4582 |
| Water | | | | | | | | | | | | 39.5 | 88.6 | 128 | 4.07 | 0.1 | | 259 |
| Waste | | | | | | | | | | | | 556 | 0 | 556 | 55.5 | 0 | | 1944 |
| Refrig. | | | | | | | | | | | | | | | | | 5.98 | 5.98 |
| Total | 13.3 | 33.8 | 10.3 | 77 | 0.15 | 0.32 | 141 | 142 | 0.31 | 16 | 16.3 | 595 | 19372 | 19967 | 60.9 | 0.85 | 19.9 | 21763 |
| Annual | | | | | | | | | | | | | | | | | | |
| Mobile | 2.1 | 1.98 | 1.43 | 11.2 | 0.02 | 0.02 | 25.8 | 25.8 | 0.02 | 2.92 | 2.94 | | 2269 | 2269 | 0.12 | 0.11 | 2.31 | 2309 |
| Area | 0.29 | 4.18 | 0.16 | 2.57 | < 0.005 | 0.01 | | 0.01 | 0.01 | | 0.01 | 0 | 170 | 170 | < 0.005 | < 0.005 | | 170 |
| Energy | 0.03 | 0.02 | 0.29 | 0.25 | < 0.005 | 0.02 | | 0.02 | 0.02 | | 0.02 | | 753 | 753 | 0.1 | 0.01 | | 759 |
| Water | | | | | | | | | | | | 6.54 | 14.7 | 21.2 | 0.67 | 0.02 | | 42.9 |
| Waste | | | | | | | | | | | | 92 | 0 | 92 | 9.19 | 0 | | 322 |
| Refrig. | | | | | | | | | | | | | | | | | 0.99 | 0.99 |
| Total | 2.43 | 6.17 | 1.88 | 14.1 | 0.03 | 0.06 | 25.8 | 25.8 | 0.06 | 2.92 | 2.98 | 98.5 | 3207 | 3306 | 10.1 | 0.14 | 3.3 | 3603 |

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.1.2. Mitigated

Mobile source emissions results are presented in Sections 2.5. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

| Land Use | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Single Family Housing | | | | | | | | | | | | | 1806 | 1806 | 0.29 | 0.04 | | 1824 |
| Health Club | | | | | | | | | | | | | 830 | 830 | 0.13 | 0.02 | | 838 |
| City Park | | | | | | | | | | | | | 0 | 0 | 0 | 0 | | 0 |
| Total | | | | | | | | | | | | | 2636 | 2636 | 0.43 | 0.05 | | 2662 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Single Family Housing | | | | | | | | | | | | | 1806 | 1806 | 0.29 | 0.04 | | 1824 |
| Health Club | | | | | | | | | | | | | 830 | 830 | 0.13 | 0.02 | | 838 |
| City Park | | | | | | | | | | | | | 0 | 0 | 0 | 0 | | 0 |
| Total | | | | | | | | | | | | | 2636 | 2636 | 0.43 | 0.05 | | 2662 |
| Annual | | | | | | | | | | | | | | | | | | |
| Single Family Housing | | | | | | | | | | | | | 299 | 299 | 0.05 | 0.01 | | 302 |
| Health Club | | | | | | | | | | | | | 137 | 137 | 0.02 | < 0.005 | | 139 |
| City Park | | | | | | | | | | | | | 0 | 0 | 0 | 0 | | 0 |
| Total | | | | | | | | | | | | | 436 | 436 | 0.07 | 0.01 | | 441 |

4.2.2. Electricity Emissions By Land Use - Mitigated

| Land Use | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | |
| Single Family Housing | | | | | | | | | | | | 1810 | 1810 | 0.29 | 0.04 | | 1828 |
| Health Club | | | | | | | | | | | | 830 | 830 | 0.13 | 0.02 | | 838 |
| City Park | | | | | | | | | | | | 0 | 0 | 0 | 0 | | 0 |
| Total | | | | | | | | | | | | 2640 | 2640 | 0.43 | 0.05 | | 2666 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | |
| Single Family Housing | | | | | | | | | | | | 1810 | 1810 | 0.29 | 0.04 | | 1828 |
| Health Club | | | | | | | | | | | | 830 | 830 | 0.13 | 0.02 | | 838 |
| City Park | | | | | | | | | | | | 0 | 0 | 0 | 0 | | 0 |
| Total | | | | | | | | | | | | 2640 | 2640 | 0.43 | 0.05 | | 2666 |
| Annual | | | | | | | | | | | | | | | | | |
| Single Family Housing | | | | | | | | | | | | 300 | 300 | 0.05 | 0.01 | | 303 |
| Health Club | | | | | | | | | | | | 137 | 137 | 0.02 | < 0.005 | | 139 |
| City Park | | | | | | | | | | | | 0 | 0 | 0 | 0 | | 0 |
| Total | | | | | | | | | | | | 437 | 437 | 0.07 | 0.01 | | 441 |

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

| Land Use | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Single Family Housing | | 0.33 | 0.16 | 2.78 | 1.18 | 0.02 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | | 3533 | 3533 | 0.31 | 0.01 | | 3543 |
| Health Club | | 0.18 | 0.09 | 1.6 | 1.34 | 0.01 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | | 1910 | 1910 | 0.17 | < 0.005 | | 1915 |
| City Park | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 |
| Total | | 0.5 | 0.25 | 4.38 | 2.53 | 0.03 | 0.35 | 0.35 | 0.35 | 0.35 | 0.35 | | 5443 | 5443 | 0.48 | 0.01 | | 5458 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Single Family Housing | | 0.33 | 0.16 | 2.78 | 1.18 | 0.02 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | | 3533 | 3533 | 0.31 | 0.01 | | 3543 |
| Health Club | | 0.18 | 0.09 | 1.6 | 1.34 | 0.01 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | | 1910 | 1910 | 0.17 | < 0.005 | | 1915 |
| City Park | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 |
| Total | | 0.5 | 0.25 | 4.38 | 2.53 | 0.03 | 0.35 | 0.35 | 0.35 | 0.35 | 0.35 | | 5443 | 5443 | 0.48 | 0.01 | | 5458 |
| Annual | | | | | | | | | | | | | | | | | | |
| Single Family Housing | | 0.06 | 0.03 | 0.51 | 0.22 | < 0.005 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | | 585 | 585 | 0.05 | < 0.005 | | 587 |
| Health Club | | 0.03 | 0.02 | 0.29 | 0.25 | < 0.005 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | | 316 | 316 | 0.03 | < 0.005 | | 317 |
| City Park | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 |
| Total | | 0.09 | 0.05 | 0.8 | 0.46 | < 0.005 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | | 901 | 901 | 0.08 | < 0.005 | | 904 |

4.2.4. Natural Gas Emissions By Land Use - Mitigated

| Land Use | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Single Family Housing | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 |
| Health Club | | 0.18 | 0.09 | 1.6 | 1.34 | 0.01 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | | 1910 | 1910 | 0.17 | < 0.005 | | 1915 |
| City Park | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 |
| Total | | 0.18 | 0.09 | 1.6 | 1.34 | 0.01 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | | 1910 | 1910 | 0.17 | < 0.005 | | 1915 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Single Family Housing | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 |
| Health Club | | 0.18 | 0.09 | 1.6 | 1.34 | 0.01 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | | 1910 | 1910 | 0.17 | < 0.005 | | 1915 |
| City Park | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 |
| Total | | 0.18 | 0.09 | 1.6 | 1.34 | 0.01 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | | 1910 | 1910 | 0.17 | < 0.005 | | 1915 |
| Annual | | | | | | | | | | | | | | | | | | |
| Single Family Housing | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 |
| Health Club | | 0.03 | 0.02 | 0.29 | 0.25 | < 0.005 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | | 316 | 316 | 0.03 | < 0.005 | | 317 |
| City Park | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 |
| Total | | 0.03 | 0.02 | 0.29 | 0.25 | < 0.005 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | | 316 | 316 | 0.03 | < 0.005 | | 317 |

4.3. Area Emissions by Source

4.3.1. Unmitigated

| Source | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Hearths | | 0.4 | 0.2 | 3.46 | 1.47 | 0.02 | 0.28 | | 0.28 | 0.28 | 0.28 | 0 | 4389 | 4389 | 0.08 | 0.01 | | 4394 |
| Consumer Products | | | 18.9 | | | | | | | | | | | | | | | |
| Architectural Coatings | | | 2.54 | | | | | | | | | | | | | | | |
| Landscape Equipment | | 3.08 | 2.89 | 0.25 | 27.8 | < 0.005 | | 0.02 | | 0.02 | 0.02 | | 83.2 | 83.2 | < 0.005 | < 0.005 | | 83.5 |
| Total | | 3.48 | 24.5 | 3.71 | 29.3 | 0.02 | 0.3 | | 0.3 | 0.3 | 0.3 | 0 | 4472 | 4472 | 0.09 | 0.01 | | 4477 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Hearths | | 0.4 | 0.2 | 3.46 | 1.47 | 0.02 | 0.28 | | 0.28 | 0.28 | 0.28 | 0 | 4389 | 4389 | 0.08 | 0.01 | | 4394 |
| Consumer Products | | | 18.9 | | | | | | | | | | | | | | | |
| Architectural Coatings | | | 2.54 | | | | | | | | | | | | | | | |
| Total | | 0.4 | 21.6 | 3.46 | 1.47 | 0.02 | 0.28 | | 0.28 | 0.28 | 0.28 | 0 | 4389 | 4389 | 0.08 | 0.01 | | 4394 |
| Annual | | | | | | | | | | | | | | | | | | |
| Hearths | | 0.02 | 0.01 | 0.14 | 0.06 | < 0.005 | | 0.01 | | 0.01 | 0.01 | 0 | 163 | 163 | < 0.005 | < 0.005 | | 163 |
| Consumer Products | | | 3.45 | | | | | | | | | | | | | | | |
| Architectural Coatings | | | 0.46 | | | | | | | | | | | | | | | |
| Landscape Equipment | | 0.28 | 0.26 | 0.02 | 2.51 | < 0.005 | < 0.005 | | < 0.005 | < 0.005 | < 0.005 | | 6.79 | 6.79 | < 0.005 | < 0.005 | | 6.82 |
| Total | | 0.29 | 4.18 | 0.16 | 2.57 | < 0.005 | | 0.01 | 0.01 | 0.01 | 0.01 | 0 | 170 | 170 | < 0.005 | < 0.005 | | 170 |

4.3.2. Mitigated

| Source | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Hearths | | 0.4 | 0.2 | 3.46 | 1.47 | 0.02 | 0.28 | | 0.28 | 0.28 | 0.28 | 0 | 4389 | 4389 | 0.08 | 0.01 | | 4394 |
| Consumer Products | | | 18.9 | | | | | | | | | | | | | | | |
| Architectural Coatings | | | 2.54 | | | | | | | | | | | | | | | |
| Landscape Equipment | | 3.08 | 2.89 | 0.25 | 27.8 | < 0.005 | | 0.02 | | 0.02 | 0.02 | | 83.2 | 83.2 | < 0.005 | < 0.005 | | 83.5 |
| Total | | 3.48 | 24.5 | 3.71 | 29.3 | 0.02 | 0.3 | | 0.3 | 0.3 | 0.3 | 0 | 4472 | 4472 | 0.09 | 0.01 | | 4477 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Hearths | | 0.4 | 0.2 | 3.46 | 1.47 | 0.02 | 0.28 | | 0.28 | 0.28 | 0.28 | 0 | 4389 | 4389 | 0.08 | 0.01 | | 4394 |
| Consumer Products | | | 18.9 | | | | | | | | | | | | | | | |
| Architectural Coatings | | | 2.54 | | | | | | | | | | | | | | | |
| Total | | 0.4 | 21.6 | 3.46 | 1.47 | 0.02 | 0.28 | | 0.28 | 0.28 | 0.28 | 0 | 4389 | 4389 | 0.08 | 0.01 | | 4394 |
| Annual | | | | | | | | | | | | | | | | | | |
| Hearths | | 0.02 | 0.01 | 0.14 | 0.06 | < 0.005 | | 0.01 | | 0.01 | 0.01 | 0 | 163 | 163 | < 0.005 | < 0.005 | | 163 |
| Consumer Products | | | 3.45 | | | | | | | | | | | | | | | |
| Architectural Coatings | | | 0.46 | | | | | | | | | | | | | | | |
| Landscape Equipment | | 0.28 | 0.26 | 0.02 | 2.51 | < 0.005 | < 0.005 | | < 0.005 | < 0.005 | < 0.005 | | 6.79 | 6.79 | < 0.005 | < 0.005 | | 6.82 |
| Total | | 0.29 | 4.18 | 0.16 | 2.57 | < 0.005 | | 0.01 | 0.01 | 0.01 | 0.01 | 0 | 170 | 170 | < 0.005 | < 0.005 | | 170 |

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

| Land Use | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Single Family Housing | | | | | | | | | | | | 23.2 | 73.7 | 96.9 | 2.39 | 0.06 | | 174 |
| Health Club | | | | | | | | | | | | 16.3 | 14.9 | 31.2 | 1.67 | 0.04 | | 84.9 |
| City Park | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | | 0 |
| Total | | | | | | | | | | | | 39.5 | 88.6 | 128 | 4.07 | 0.1 | | 259 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Single Family Housing | | | | | | | | | | | | 23.2 | 73.7 | 96.9 | 2.39 | 0.06 | 174 |
| Health Club | | | | | | | | | | | | 16.3 | 14.9 | 31.2 | 1.67 | 0.04 | 84.9 |
| City Park | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | | | | | | | | | | | | 39.5 | 88.6 | 128 | 4.07 | 0.1 | 259 |
| Annual | | | | | | | | | | | | | | | | | |
| Single Family Housing | | | | | | | | | | | | 3.85 | 12.2 | 16 | 0.4 | 0.01 | 28.8 |
| Health Club | | | | | | | | | | | | 2.7 | 2.46 | 5.16 | 0.28 | 0.01 | 14.1 |
| City Park | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | | | | | | | | | | | | 6.54 | 14.7 | 21.2 | 0.67 | 0.02 | 42.9 |

4.4.2. Mitigated

| Land Use | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Single Family Housing | | | | | | | | | | | | 23.2 | 73.7 | 96.9 | 2.39 | 0.06 | | 174 |
| Health Club | | | | | | | | | | | | 16.3 | 14.9 | 31.2 | 1.67 | 0.04 | | 84.9 |
| City Park | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | | 0 |
| Total | | | | | | | | | | | | 39.5 | 88.6 | 128 | 4.07 | 0.1 | | 259 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Single Family Housing | | | | | | | | | | | | 23.2 | 73.7 | 96.9 | 2.39 | 0.06 | | 174 |
| Health Club | | | | | | | | | | | | 16.3 | 14.9 | 31.2 | 1.67 | 0.04 | | 84.9 |
| City Park | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | | 0 |
| Total | | | | | | | | | | | | 39.5 | 88.6 | 128 | 4.07 | 0.1 | | 259 |
| Annual | | | | | | | | | | | | | | | | | | |
| Single Family Housing | | | | | | | | | | | | 3.85 | 12.2 | 16 | 0.4 | 0.01 | | 28.8 |
| Health Club | | | | | | | | | | | | 2.7 | 2.46 | 5.16 | 0.28 | 0.01 | | 14.1 |
| City Park | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | | 0 |
| Total | | | | | | | | | | | | 6.54 | 14.7 | 21.2 | 0.67 | 0.02 | | 42.9 |

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

| Land Use | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Single Family Housing | | | | | | | | | | | | 114 | 0 | 114 | 11.4 | 0 | | 398 |
| Health Club | | | | | | | | | | | | 442 | 0 | 442 | 44.1 | 0 | | 1545 |
| City Park | | | | | | | | | | | | 0.19 | 0 | 0.19 | 0.02 | 0 | | 0.65 |
| Total | | | | | | | | | | | | 556 | 0 | 556 | 55.5 | 0 | | 1944 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Single Family Housing | | | | | | | | | | | | 114 | 0 | 114 | 11.4 | 0 | | 398 |
| Health Club | | | | | | | | | | | | 442 | 0 | 442 | 44.1 | 0 | | 1545 |
| City Park | | | | | | | | | | | | 0.19 | 0 | 0.19 | 0.02 | 0 | | 0.65 |
| Total | | | | | | | | | | | | 556 | 0 | 556 | 55.5 | 0 | | 1944 |
| Annual | | | | | | | | | | | | | | | | | | |
| Single Family Housing | | | | | | | | | | | | 18.9 | 0 | 18.9 | 1.88 | 0 | | 66 |
| Health Club | | | | | | | | | | | | 73.1 | 0 | 73.1 | 7.31 | 0 | | 256 |
| City Park | | | | | | | | | | | | 0.03 | 0 | 0.03 | < 0.005 | 0 | | 0.11 |
| Total | | | | | | | | | | | | 92 | 0 | 92 | 9.19 | 0 | | 322 |

4.5.2. Mitigated

| Land Use | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Single Family Housing | | | | | | | | | | | | 114 | 0 | 114 | 11.4 | 0 | | 398 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Health Club | | | | | | | | | | | | 442 | 0 | 442 | 44.1 | 0 | 1545 |
| City Park | | | | | | | | | | | | 0.19 | 0 | 0.19 | 0.02 | 0 | 0.65 |
| Total | | | | | | | | | | | | 556 | 0 | 556 | 55.5 | 0 | 1944 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | |
| Single Family Housing | | | | | | | | | | | | 114 | 0 | 114 | 11.4 | 0 | 398 |
| Health Club | | | | | | | | | | | | 442 | 0 | 442 | 44.1 | 0 | 1545 |
| City Park | | | | | | | | | | | | 0.19 | 0 | 0.19 | 0.02 | 0 | 0.65 |
| Total | | | | | | | | | | | | 556 | 0 | 556 | 55.5 | 0 | 1944 |
| Annual | | | | | | | | | | | | | | | | | |
| Single Family Housing | | | | | | | | | | | | 18.9 | 0 | 18.9 | 1.88 | 0 | 66 |
| Health Club | | | | | | | | | | | | 73.1 | 0 | 73.1 | 7.31 | 0 | 256 |
| City Park | | | | | | | | | | | | 0.03 | 0 | 0.03 | < 0.005 | 0 | 0.11 |
| Total | | | | | | | | | | | | 92 | 0 | 92 | 9.19 | 0 | 322 |

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

| Land Use | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | | |
| Single Family Housing | | | | | | | | | | | | | | | | | | 5.29 | 5.29 |
| Health Club | | | | | | | | | | | | | | | | | | 0.69 | 0.69 |
| City Park | | | | | | | | | | | | | | | | | | 0 | 0 |
| Total | | | | | | | | | | | | | | | | | | 5.98 | 5.98 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | | |
| Single Family Housing | | | | | | | | | | | | | | | | | | 5.29 | 5.29 |
| Health Club | | | | | | | | | | | | | | | | | | 0.69 | 0.69 |
| City Park | | | | | | | | | | | | | | | | | | 0 | 0 |
| Total | | | | | | | | | | | | | | | | | | 5.98 | 5.98 |
| Annual | | | | | | | | | | | | | | | | | | | |
| Single Family Housing | | | | | | | | | | | | | | | | | | 0.88 | 0.88 |
| Health Club | | | | | | | | | | | | | | | | | | 0.11 | 0.11 |
| City Park | | | | | | | | | | | | | | | | | | 0 | 0 |
| Total | | | | | | | | | | | | | | | | | | 0.99 | 0.99 |

4.6.2. Mitigated

| Land Use | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | | |
| Single Family Housing | | | | | | | | | | | | | | | | | | 5.29 | 5.29 |
| Health Club | | | | | | | | | | | | | | | | | | 0.69 | 0.69 |
| City Park | | | | | | | | | | | | | | | | | | 0 | 0 |
| Total | | | | | | | | | | | | | | | | | | 5.98 | 5.98 |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | | |
| Single Family Housing | | | | | | | | | | | | | | | | | | 5.29 | 5.29 |
| Health Club | | | | | | | | | | | | | | | | | | 0.69 | 0.69 |
| City Park | | | | | | | | | | | | | | | | | | 0 | 0 |
| Total | | | | | | | | | | | | | | | | | | 5.98 | 5.98 |
| Annual | | | | | | | | | | | | | | | | | | | |
| Single Family Housing | | | | | | | | | | | | | | | | | | 0.88 | 0.88 |
| Health Club | | | | | | | | | | | | | | | | | | 0.11 | 0.11 |
| City Park | | | | | | | | | | | | | | | | | | 0 | 0 |
| Total | | | | | | | | | | | | | | | | | | 0.99 | 0.99 |

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

| Equipment Type | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Annual | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |

4.7.2. Mitigated

| Equipment Type | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Annual | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

| Equipment Type | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Annual | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |

4.8.2. Mitigated

| Equipment Type | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Annual | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

| Equipment Type | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Annual | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |

4.9.2. Mitigated

| Equipment Type | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |

Total
Daily, Winter (Max)
Total
Annual
Total

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

| Vegetation | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Annual | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

| Land Use | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Annual | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

| Species | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Avoided | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Sequestered | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Removed | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Avoided | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Sequestered | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Removed | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| Annual | | | | | | | | | | | | | | | | | | |
| Avoided | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Sequestered | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Removed | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

| Vegetation | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Annual | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

| Land Use | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |
| Annual | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | |

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

| Species | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | | | | | | | | | | | | | | | | | | |
| Avoided | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Sequestered | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Removed | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| Daily, Winter (Max) | | | | | | | | | | | | | | | | | | |
| Avoided | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Sequestered | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Removed | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| Annual | | | | | | | | | | | | | | | | | | |
| Avoided | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Sequestered | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |
| Removed | | | | | | | | | | | | | | | | | | |
| Subtotal | | | | | | | | | | | | | | | | | | |

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

| Land Use Type | Trips/ Weekday | Trips/ Saturday | Trips/Sunday | Trips/Year | VMT/ Weekday | VMT/ Saturday | VMT/Sunday | VMT/Year |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Total all Land Uses | 2842 | 2842 | 2842 | 1037330 | 17810 | 17810 | 17810 | 6500650 |

5.9.2. Mitigated

| Land Use Type | Trips/ Weekday | Trips/ Saturday | Trips/Sunday | Trips/Year | VMT/ Weekday | VMT/ Saturday | VMT/Sunday | VMT/Year |
|---|---|---|---|---|---|---|---|---|
| Total all Land Uses | 2842 | 2842 | 2842 | 1037330 | 17810 | 17810 | 17810 | 6500650 |

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

| Hearth Type | Unmitigated (number) |
|---|---|
| Single Family Housing | |
| Wood Fireplaces | 0 |
| Gas Fireplaces | 10 |
| Propane Fireplaces | 0 |
| Electric Fireplaces | 0 |
| No Fireplaces | 2 |
| Wood Fireplaces | 0 |
| Gas Fireplaces | 199 |
| Propane Fireplaces | 0 |
| Electric Fireplaces | 0 |
| No Fireplaces | 36 |
| Conventional Wood Stoves | 0 |
| Catalytic Wood Stoves | 0 |
| Non-Catalytic Wood Stoves | 0 |
| Pellet Wood Stoves | 0 |
| Conventional Wood Stoves | 0 |
| Catalytic Wood Stoves | 0 |
| Non-Catalytic Wood Stoves | 0 |
| Pellet Wood Stoves | 0 |

5.10.1.2. Mitigated

| Hearth Type | Unmitigated (number) |
|---|---|
| Single Family Housing | |
| Wood Fireplaces | 0 |
| Gas Fireplaces | 10 |
| Propane Fireplaces | 0 |
| Electric Fireplaces | 0 |
| No Fireplaces | 2 |
| Wood Fireplaces | 0 |
| Gas Fireplaces | 199 |
| Propane Fireplaces | 0 |
| Electric Fireplaces | 0 |
| No Fireplaces | 36 |
| Conventional Wood Stoves | 0 |
| Catalytic Wood Stoves | 0 |
| Non-Catalytic Wood Stoves | 0 |
| Pellet Wood Stoves | 0 |
| Conventional Wood Stoves | 0 |
| Catalytic Wood Stoves | 0 |

| | |
|---|---|
| Non-Catalytic Wood Stoves | 0 |
| Pellet Wood Stoves | 0 |

5.10.2. Architectural Coatings

| Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|
| 1496576 | 498859 | 215622 | 71874 | |

5.10.3. Landscape Equipment

| Season | Unit | Value |
|---|---|---|
| Snow Days | day/yr | 0 |
| Summer Days | day/yr | 180 |

5.10.4. Landscape Equipment - Mitigated

| Season | Unit | Value |
|---|---|---|
| Snow Days | day/yr | 0 |
| Summer Days | day/yr | 180 |

5.11. Operational Energy Consumption

5.11.1. Unmitigated

| Land Use | Electricity (kWh/y | CO2 | CH4 | N2O | Natural Gas (kBTU/yr) |
|---|---|---|---|---|---|
| Single Family Housing | 153463 | 204 | 0.033 | 0.004 | 523620 |
| Single Family Housing | 3077781 | 204 | 0.033 | 0.004 | 10501499 |
| Health Club | 1484911 | 204 | 0.033 | 0.004 | 5959592 |
| City Park | 0 | 204 | 0.033 | 0.004 | 0 |

5.11.2. Mitigated

| Land Use | Electricity (kWh/y | CO2 | CH4 | N2O | Natural Gas (kBTU/yr) |
|---|---|---|---|---|---|
| Single Family Housing | 157580 | 204 | 0.033 | 0.004 | 0 |
| Single Family Housing | 3081898 | 204 | 0.033 | 0.004 | 0 |
| Health Club | 1484911 | 204 | 0.033 | 0.004 | 5959592 |
| City Park | 0 | 204 | 0.033 | 0.004 | 0 |

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

| Land Use | Indoor Water (ga | Outdoor Water (gal/year) |
|---|---|---|
| Single Family Housing | 575729 | 2765385 |
| Single Family Housing | 11546567 | 55461432 |
| Health Club | 8501709 | 0 |
| City Park | 0 | 0 |

5.12.2. Mitigated

| Land Use | Indoor Water (ga | Outdoor Water (gal/year) |
|---|---|---|
| Single Family Housing | 575729 | 2765385 |
| Single Family Housing | 11546567 | 55461432 |
| Health Club | 8501709 | 0 |
| City Park | 0 | 0 |

5.13. Operational Waste Generation

5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| Single Family Housing | 10.1 | |
| Single Family Housing | 201 | |
| Health Club | 819 | |
| City Park | 0.34 | |

5.13.2. Mitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| Single Family Housing | 10.1 | |
| Single Family Housing | 201 | |
| Health Club | 819 | |
| City Park | 0.34 | |

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

| Land Use Type | Equipment Type | Refrigerant | GWP | Quantity (kg) | Operations Leak | Service Leak Rat | Times Serviced |
|---|---|---|---|---|---|---|---|
| Single Family Housing | Average room A/( | R-410A | 2088 | < 0.005 | 2.5 | 2.5 | 10 |
| Single Family Housing | Household refrig | R-134a | 1430 | 0.12 | 0.6 | 0 | 1 |
| Single Family Housing | Average room A/( | R-410A | 2088 | < 0.005 | 2.5 | 2.5 | 10 |
| Single Family Housing | Household refrig | R-134a | 1430 | 0.12 | 0.6 | 0 | 1 |
| Health Club | Other commerci | R-410A | 2088 | < 0.005 | 4 | 4 | 18 |
| Health Club | Stand-alone reta | R-134a | 1430 | 0.04 | 1 | 0 | 1 |
| City Park | Other commerci | R-410A | 2088 | < 0.005 | 4 | 4 | 18 |
| City Park | Stand-alone reta | R-134a | 1430 | 0.04 | 1 | 0 | 1 |

5.14.2. Mitigated

| Land Use Type | Equipment Type | Refrigerant | GWP | Quantity (kg) | Operations Leak | Service Leak Rat | Times Serviced |
|---|---|---|---|---|---|---|---|
| Single Family Housing | Average room A/( | R-410A | 2088 | < 0.005 | 2.5 | 2.5 | 10 |
| Single Family Housing | Household refrig | R-134a | 1430 | 0.12 | 0.6 | 0 | 1 |
| Single Family Housing | Average room A/( | R-410A | 2088 | < 0.005 | 2.5 | 2.5 | 10 |
| Single Family Housing | Household refrig | R-134a | 1430 | 0.12 | 0.6 | 0 | 1 |
| Health Club | Other commerci | R-410A | 2088 | < 0.005 | 4 | 4 | 18 |
| Health Club | Stand-alone reta | R-134a | 1430 | 0.04 | 1 | 0 | 1 |
| City Park | Other commerci | R-410A | 2088 | < 0.005 | 4 | 4 | 18 |
| City Park | Stand-alone reta | R-134a | 1430 | 0.04 | 1 | 0 | 1 |

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

| Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|

5.15.2. Mitigated

| Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

| Equipment Type | Fuel Type | Number per Day | Hours per Day | Hours per Year | Horsepower | Load Factor |
|---|---|---|---|---|---|---|

5.16.2. Process Boilers

| Equipment Type | Fuel Type | Number | Boiler Rating (MM | Daily Heat Input ( | Annual Heat Input (MMBtu/yr) |
|---|---|---|---|---|---|

5.17. User Defined

| Equipment Type | Fuel Type |
|---|---|

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
|---|---|---|---|

5.18.1.2. Mitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
|---|---|---|---|

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

| Biomass Cover Type | Initial Acres | Final Acres |
|---|---|---|

5.18.1.2. Mitigated

| Biomass Cover Type | Initial Acres | Final Acres |
|---|---|---|

5.18.2. Sequestration

5.18.2.1. Unmitigated

| Tree Type | Number | Electricity Saved (kWh/year) | Natural Gas Saved (btu/year) |
|---|---|---|---|

5.18.2.2. Mitigated

| Tree Type | Number | Electricity Saved (kWh/year) | Natural Gas Saved (btu/year) |
|---|---|---|---|

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

| Climate Hazard | Result for Projec | Unit |
|---|---|---|
| Temperature and Extreme Heat | 31.2 | annual days of extreme heat |
| Extreme Precipitation | 9.95 | annual days with precipitation above 20 mm |
| Sea Level Rise | | meters of inundation depth |
| Wildfire | 16.6 | annual hectares burned |

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

| Climate Hazard | Exposure Score | Sensitivity Score | Adaptive Capacity Score | Vulnerability Score |
|---|---|---|---|---|
| Temperature and Extreme Heat | N/A | N/A | N/A | N/A |
| Extreme Precipitation | 2 | 0 | 0 | N/A |
| Sea Level Rise | N/A | N/A | N/A | N/A |
| Wildfire | 1 | 0 | 0 | N/A |
| Flooding | N/A | N/A | N/A | N/A |
| Drought | N/A | N/A | N/A | N/A |
| Snowpack Reduction | 0 | 0 | 0 | N/A |
| Air Quality Degradation | N/A | N/A | N/A | N/A |

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

| Climate Hazard | Exposure Score | Sensitivity Score | Adaptive Capacity Score | Vulnerability Score |
|---|---|---|---|---|
| Temperature and Extreme Heat | N/A | N/A | N/A | N/A |
| Extreme Precipitation | 2 | 1 | 1 | 3 |
| Sea Level Rise | N/A | N/A | N/A | N/A |
| Wildfire | 1 | 1 | 1 | 2 |
| Flooding | N/A | N/A | N/A | N/A |
| Drought | N/A | N/A | N/A | N/A |
| Snowpack Reduction | 1 | 1 | 1 | 2 |
| Air Quality Degradation | N/A | N/A | N/A | N/A |

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

| Indicator | Result for Project Census Tract |
|---|---|
| Exposure Indicators | |
| AQ-Ozone | 75.1 |

| | |
|---|---|
| AQ-PM | 14.1 |
| AQ-DPM | 12.2 |
| Drinking Water | 15.7 |
| Lead Risk Housing | 1.95 |
| Pesticides | 27.4 |
| Toxic Releases | 13.2 |
| Traffic | 15.6 |
| Effect Indicators | |
| CleanUp Sites | 50.3 |
| Groundwater | 0 |
| | |
| Haz Waste Facilities/Generators | 19.2 |
| Impaired Water Bodies | 12.5 |
| Solid Waste | 2.52 |
| Sensitive Population | |
| Asthma | 7.33 |
| Cardio-vascular | 25.7 |
| Low Birth Weights | 0.23 |
| Socioeconomic Factor Indicators | |
| Education | 2.3 |
| Housing | 2.43 |
| Linguistic | 0.92 |
| Poverty | 3.54 |
| Unemployment | 26.9 |

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

| Indicator | Result for Project Census Tract |
|---|---|
| Economic | |
| Above Poverty | 99.08892596 |
| Employed | 79.81521879 |
| Median HI | 93.40433723 |
| Education | |
| Bachelor's or higher | 84.10111639 |
| High school enrollment | 100 |
| Preschool enrollment | 21.10868728 |
| Transportation | |
| Auto Access | 90.86359553 |
| Active commuting | 57.71846529 |
| Social | |
| 2-parent households | 98.53714872 |
| Voting | 94.81586039 |
| Neighborhood | |
| Alcohol availability | 88.14320544 |
| Park access | 39.61247273 |
| Retail density | 15.95021173 |
| Supermarket access | 26.3826511 |
| Tree canopy | 94.66187604 |
| Housing | |
| Homeownership | 99.28140639 |
| Housing habitability | 99.97433594 |

| | |
|---|---|
| Low-inc homeowner severe housing cost burden | 94.52072373 |
| Low-inc renter severe housing cost burden | 99.08892596 |
| Uncrowded housing | 96.93314513 |
| Health Outcomes | |
| Insured adults | 97.11279353 |
| Arthritis | 0 |
| Asthma ER Admissions | 91 |
| High Blood Pressure | 0 |
| Cancer (excluding skin) | 0 |
| Asthma | 0 |
| Coronary Heart Disease | 0 |
| Chronic Obstructive Pulmonary Disease | 0 |
| Diagnosed Diabetes | 0 |
| Life Expectancy at Birth | 75 |
| Cognitively Disabled | 98 |
| Physically  Disabled | 99 |
| Heart Attack ER Admissions | 77 |
| Mental Health Not Good | 0 |
| Chronic Kidney Disease | 0 |
| Obesity | 0 |
| Pedestrian Injuries | 20 |
| Physical Health Not Good | 0 |
| Stroke | 0 |
| Health Risk Behaviors | |
| Binge Drinking | 0 |
| Current Smoker | 0 |
| No Leisure Time for Physical Activity | 0 |
| Climate Change Exposures | |
| Wildfire Risk | 0 |
| SLR Inundation Area | 0 |
| Children | 55 |
| Elderly | 47 |
| English Speaking | 73 |
| Foreign-born | 6.2 |
| Outdoor Workers | 66 |
| Climate Change Adaptive Capacity | |
| Impervious Surface Cover | 91 |
| Traffic Density | 18 |
| Traffic Access | 0 |
| Other Indices | |
| Hardship | 7.2 |
| Other Decision Support | |
| 2016 Voting | 98 |

7.3. Overall Health & Equity Scores

| Metric | Result for Project Census Tract |
|---|---|

| | |
|---|---|
| CalEnviroScreen 4.0 Score for Project Location (a) | 0 |
| Healthy Places Index Score for Project Location (b) | 95 |
| Project Located in a Designated Disadvantaged Community (Senate Bill 535) | No |
| Project Located in a Low-Income Community (Assembly Bill 1550) | No |
| Project Located in a Community Air Protection Program Community (Assembly Bill 617) | No |

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

| | |
|---|---|
| Measure Title | Co-Benefits Achieved |

7.5. Evaluation Scorecard

| Category | Number of Applicable Measures | Total Points Earned by Applicable Measures | Max Possible Points | Weighted Score |
|---|---|---|---|---|

7.6. Health & Equity Custom Measures

| | |
|---|---|
| Measure Title | Sponsor |

8. User Changes to Default Data

| Screen | Justification |
|---|---|
| Land Use | PD |
| Operations: Hearths | No wood fire places or wood stoves |
| Operations: Energy Use | Caleemod defaults |
| Operations: Road Dust | Given project area characteristics, assumed 99% paved roads |
| Operations: Architectural Coatings | El Dorado limit = 100 for interior, 50 for exterior (Rule 215) |

# Green Valley (alt pipeline) Detailed Report

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# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | Green Valley (alt pipeline) |
| Construction Start Date | 4/1/2025 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 2.30 |
| Precipitation (days) | 10.4 |
| Location | 38.70432290409059, -121.04617842490336 |
| County | El Dorado-Mountain County |
| City | Unincorporated |
| Air District | El Dorado County AQMD |
| Air Basin | Mountain Counties |
| TAZ | 400 |
| EDFZ | 4 |
| Electric Utility | Pacific Gas & Electric Company |
| Gas Utility | Pacific Gas & Electric |
| App Version | 2022.1.1.22 |

## 1.2. Land Use Types

| Land Use Subtype | Size | Unit | Lot Acreage | Building Area (sq ft) | Landscape Area (sq ft) | Special Landscape Area (sq ft) | Population | Description |
|---|---|---|---|---|---|---|---|---|
| Single Family Housing | 18.0 | Dwelling Unit | 5.00 | 35,100 | 210,831 | — | 46.0 | Low Density Residential |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Single Family Housing | 361 | Dwelling Unit | 171 | 703,950 | 4,228,341 | — | 917 | High Density Residential |
| Health Club | 144 | 1000sqft | 3.30 | 143,748 | — | — | — | Clubhouse |
| City Park | 4.00 | Acre | 4.00 | 0.00 | — | — | — | Public Facilities (Lot A) |
| City Park | 57.6 | Acre | 57.6 | 0.00 | — | — | — | Open Space |
| City Park | 8.00 | Acre | 8.00 | 0.00 | — | — | — | Landscape Lots L1-L13, Open Spaces C-K |
| Road Construction | 3.00 | Mile | 31.5 | 0.00 | 0.00 | — | — | road construction |
| Road Construction | 8.20 | Mile | 67.0 | 0.00 | 0.00 | — | — | Offsite improvements |

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

| Sector | # | Measure Title |
|---|---|---|
| Construction | C-5 | Use Advanced Engine Tiers |

# 2. Emissions Summary

## 2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Un/Mit. | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 12.0 | 10.2 | 86.8 | 97.3 | 0.18 | 3.78 | 147 | 147 | 3.48 | 15.0 | 16.1 | — | 21,169 | 21,169 | 0.86 | 0.41 | 12.3 | 21,263 |
| Mit. | 2.87 | 3.80 | 17.3 | 119 | 0.18 | 0.47 | 147 | 147 | 0.46 | 15.0 | 15.1 | — | 21,169 | 21,169 | 0.86 | 0.41 | 12.3 | 21,263 |
| % Reduced | 76% | 63% | 80% | -22% | — | 88% | — | < 0.5% | 87% | — | 7% | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 6.44 | 129 | 45.6 | 55.3 | 0.09 | 1.91 | 147 | 147 | 1.76 | 15.0 | 15.4 | — | 10,950 | 10,950 | 0.43 | 0.41 | 0.35 | 10,998 |
| Mit. | 1.52 | 129 | 10.1 | 63.5 | 0.09 | 0.18 | 147 | 147 | 0.18 | 15.0 | 15.1 | — | 10,950 | 10,950 | 0.43 | 0.41 | 0.35 | 10,998 |
| % Reduced | 76% | < 0.5% | 78% | -15% | — | 90% | — | < 0.5% | 90% | — | 2% | — | — | — | — | — | — | — |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 3.63 | 22.2 | 25.8 | 29.8 | 0.05 | 1.07 | 102 | 102 | 0.99 | 10.4 | 10.7 | — | 6,591 | 6,591 | 0.24 | 0.29 | 3.78 | 6,636 |
| Mit. | 0.97 | 22.2 | 5.56 | 35.0 | 0.05 | 0.12 | 102 | 102 | 0.12 | 10.4 | 10.5 | — | 6,591 | 6,591 | 0.24 | 0.29 | 3.78 | 6,636 |
| % Reduced | 73% | < 0.5% | 78% | -18% | — | 88% | — | < 0.5% | 88% | — | 2% | — | — | — | — | — | — | — |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.66 | 4.05 | 4.71 | 5.44 | 0.01 | 0.20 | 18.6 | 18.7 | 0.18 | 1.90 | 1.94 | — | 1,091 | 1,091 | 0.04 | 0.05 | 0.63 | 1,099 |
| Mit. | 0.18 | 4.05 | 1.01 | 6.40 | 0.01 | 0.02 | 18.6 | 18.6 | 0.02 | 1.90 | 1.91 | — | 1,091 | 1,091 | 0.04 | 0.05 | 0.63 | 1,099 |
| % Reduced | 73% | < 0.5% | 78% | -18% | — | 88% | — | < 0.5% | 88% | — | 2% | — | — | — | — | — | — | — |

## 2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Year | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily - Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 12.0 | 10.2 | 86.8 | 97.3 | 0.18 | 3.78 | 93.1 | 96.9 | 3.48 | 12.7 | 16.1 | — | 21,169 | 21,169 | 0.86 | 0.22 | 6.01 | 21,263 |
| 2026 | 2.32 | 2.03 | 13.3 | 25.1 | 0.04 | 0.39 | 147 | 147 | 0.36 | 15.0 | 15.3 | — | 6,551 | 6,551 | 0.13 | 0.41 | 12.3 | 6,688 |
| 2027 | 2.23 | 1.94 | 12.7 | 24.3 | 0.04 | 0.35 | 147 | 147 | 0.32 | 15.0 | 15.3 | — | 6,478 | 6,478 | 0.13 | 0.39 | 11.2 | 6,608 |
| 2028 | 2.09 | 1.86 | 12.0 | 23.6 | 0.04 | 0.31 | 147 | 147 | 0.29 | 15.0 | 15.3 | — | 6,391 | 6,391 | 0.13 | 0.39 | 10.1 | 6,520 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2029 | 2.03 | 4.31 | 11.4 | 22.9 | 0.04 | 0.29 | 147 | 147 | 0.27 | 15.0 | 15.2 | — | 6,301 | 6,301 | 0.13 | 0.38 | 9.09 | 6,426 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 6.44 | 5.45 | 45.6 | 55.3 | 0.09 | 1.91 | 147 | 147 | 1.76 | 15.0 | 15.4 | — | 10,950 | 10,950 | 0.43 | 0.41 | 0.35 | 10,998 |
| 2026 | 2.24 | 1.94 | 13.7 | 22.6 | 0.04 | 0.39 | 147 | 147 | 0.36 | 15.0 | 15.3 | — | 6,335 | 6,335 | 0.15 | 0.41 | 0.32 | 6,460 |
| 2027 | 2.10 | 1.85 | 13.0 | 22.0 | 0.04 | 0.35 | 147 | 147 | 0.32 | 15.0 | 15.3 | — | 6,265 | 6,265 | 0.15 | 0.39 | 0.29 | 6,387 |
| 2028 | 2.02 | 1.73 | 12.3 | 21.4 | 0.04 | 0.31 | 147 | 147 | 0.29 | 15.0 | 15.3 | — | 6,183 | 6,183 | 0.14 | 0.39 | 0.26 | 6,304 |
| 2029 | 1.96 | 129 | 11.7 | 20.8 | 0.04 | 0.29 | 147 | 147 | 0.27 | 15.0 | 15.2 | — | 6,097 | 6,097 | 0.14 | 0.38 | 0.24 | 6,214 |
| 2030 | 0.26 | 129 | 0.89 | 2.51 | < 0.005 | 0.01 | 24.4 | 24.4 | 0.01 | 2.49 | 2.50 | — | 497 | 497 | 0.01 | 0.02 | 0.03 | 503 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 3.63 | 3.07 | 25.8 | 29.8 | 0.05 | 1.07 | 50.3 | 51.4 | 0.99 | 5.77 | 6.76 | — | 6,591 | 6,591 | 0.24 | 0.12 | 1.70 | 6,636 |
| 2026 | 1.60 | 1.39 | 9.70 | 16.2 | 0.03 | 0.28 | 102 | 102 | 0.26 | 10.4 | 10.7 | — | 4,555 | 4,555 | 0.10 | 0.29 | 3.78 | 4,648 |
| 2027 | 1.50 | 1.33 | 9.19 | 15.8 | 0.03 | 0.25 | 102 | 102 | 0.23 | 10.4 | 10.6 | — | 4,505 | 4,505 | 0.10 | 0.28 | 3.44 | 4,595 |
| 2028 | 1.45 | 1.28 | 8.71 | 15.5 | 0.03 | 0.22 | 102 | 102 | 0.21 | 10.4 | 10.6 | — | 4,457 | 4,457 | 0.10 | 0.28 | 3.13 | 4,547 |
| 2029 | 1.15 | 4.71 | 7.08 | 12.5 | 0.02 | 0.19 | 72.9 | 73.1 | 0.18 | 7.45 | 7.62 | — | 3,377 | 3,377 | 0.08 | 0.19 | 1.99 | 3,437 |
| 2030 | 0.05 | 22.2 | 0.15 | 0.44 | < 0.005 | < 0.005 | 4.09 | 4.09 | < 0.005 | 0.42 | 0.42 | — | 87.0 | 87.0 | < 0.005 | < 0.005 | 0.08 | 88.0 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.66 | 0.56 | 4.71 | 5.44 | 0.01 | 0.20 | 9.18 | 9.37 | 0.18 | 1.05 | 1.23 | — | 1,091 | 1,091 | 0.04 | 0.02 | 0.28 | 1,099 |
| 2026 | 0.29 | 0.25 | 1.77 | 2.96 | < 0.005 | 0.05 | 18.6 | 18.6 | 0.05 | 1.90 | 1.94 | — | 754 | 754 | 0.02 | 0.05 | 0.63 | 769 |
| 2027 | 0.27 | 0.24 | 1.68 | 2.88 | < 0.005 | 0.05 | 18.6 | 18.6 | 0.04 | 1.90 | 1.94 | — | 746 | 746 | 0.02 | 0.05 | 0.57 | 761 |
| 2028 | 0.26 | 0.23 | 1.59 | 2.82 | < 0.005 | 0.04 | 18.6 | 18.7 | 0.04 | 1.90 | 1.94 | — | 738 | 738 | 0.02 | 0.05 | 0.52 | 753 |
| 2029 | 0.21 | 0.86 | 1.29 | 2.28 | < 0.005 | 0.03 | 13.3 | 13.3 | 0.03 | 1.36 | 1.39 | — | 559 | 559 | 0.01 | 0.03 | 0.33 | 569 |
| 2030 | 0.01 | 4.05 | 0.03 | 0.08 | < 0.005 | < 0.005 | 0.75 | 0.75 | < 0.005 | 0.08 | 0.08 | — | 14.4 | 14.4 | < 0.005 | < 0.005 | 0.01 | 14.6 |

## 2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Year | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily - Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 2.87 | 2.73 | 17.3 | 119 | 0.18 | 0.47 | 93.1 | 93.4 | 0.46 | 12.7 | 13.0 | — | 21,169 | 21,169 | 0.86 | 0.22 | 6.01 | 21,263 |
| 2026 | 1.39 | 1.28 | 6.27 | 26.9 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15.0 | 15.1 | — | 6,551 | 6,551 | 0.13 | 0.41 | 12.3 | 6,688 |
| 2027 | 1.35 | 1.24 | 6.10 | 26.2 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15.0 | 15.1 | — | 6,478 | 6,478 | 0.13 | 0.39 | 11.2 | 6,608 |
| 2028 | 1.25 | 1.20 | 5.87 | 25.5 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15.0 | 15.1 | — | 6,391 | 6,391 | 0.13 | 0.39 | 10.1 | 6,520 |
| 2029 | 1.22 | 3.80 | 5.64 | 24.9 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15.0 | 15.1 | — | 6,301 | 6,301 | 0.13 | 0.38 | 9.09 | 6,426 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 1.52 | 1.47 | 10.1 | 63.5 | 0.09 | 0.18 | 147 | 147 | 0.18 | 15.0 | 15.1 | — | 10,950 | 10,950 | 0.43 | 0.41 | 0.35 | 10,998 |
| 2026 | 1.31 | 1.20 | 6.66 | 24.4 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15.0 | 15.1 | — | 6,335 | 6,335 | 0.15 | 0.41 | 0.32 | 6,460 |
| 2027 | 1.22 | 1.15 | 6.41 | 23.8 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15.0 | 15.1 | — | 6,265 | 6,265 | 0.15 | 0.39 | 0.29 | 6,387 |
| 2028 | 1.18 | 1.06 | 6.17 | 23.3 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15.0 | 15.1 | — | 6,183 | 6,183 | 0.14 | 0.39 | 0.26 | 6,304 |
| 2029 | 1.16 | 129 | 5.93 | 22.8 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15.0 | 15.1 | — | 6,097 | 6,097 | 0.14 | 0.38 | 0.24 | 6,214 |
| 2030 | 0.16 | 129 | 0.75 | 2.36 | < 0.005 | < 0.005 | 24.4 | 24.4 | < 0.005 | 2.49 | 2.49 | — | 497 | 497 | 0.01 | 0.02 | 0.03 | 503 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.97 | 0.92 | 5.56 | 35.0 | 0.05 | 0.12 | 50.3 | 50.4 | 0.12 | 5.77 | 5.89 | — | 6,591 | 6,591 | 0.24 | 0.12 | 1.70 | 6,636 |
| 2026 | 0.94 | 0.86 | 4.67 | 17.6 | 0.03 | 0.06 | 102 | 102 | 0.06 | 10.4 | 10.5 | — | 4,555 | 4,555 | 0.10 | 0.29 | 3.78 | 4,648 |
| 2027 | 0.87 | 0.83 | 4.50 | 17.1 | 0.03 | 0.06 | 102 | 102 | 0.06 | 10.4 | 10.5 | — | 4,505 | 4,505 | 0.10 | 0.28 | 3.44 | 4,595 |
| 2028 | 0.85 | 0.81 | 4.34 | 16.8 | 0.03 | 0.06 | 102 | 102 | 0.06 | 10.4 | 10.5 | — | 4,457 | 4,457 | 0.10 | 0.28 | 3.13 | 4,547 |
| 2029 | 0.62 | 4.29 | 3.32 | 13.6 | 0.02 | 0.05 | 72.9 | 72.9 | 0.05 | 7.45 | 7.49 | — | 3,377 | 3,377 | 0.08 | 0.19 | 1.99 | 3,437 |
| 2030 | 0.03 | 22.2 | 0.13 | 0.41 | < 0.005 | < 0.005 | 4.09 | 4.09 | < 0.005 | 0.42 | 0.42 | — | 87.0 | 87.0 | < 0.005 | < 0.005 | 0.08 | 88.0 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.18 | 0.17 | 1.01 | 6.40 | 0.01 | 0.02 | 9.18 | 9.20 | 0.02 | 1.05 | 1.08 | — | 1,091 | 1,091 | 0.04 | 0.02 | 0.28 | 1,099 |
| 2026 | 0.17 | 0.16 | 0.85 | 3.20 | < 0.005 | 0.01 | 18.6 | 18.6 | 0.01 | 1.90 | 1.91 | — | 754 | 754 | 0.02 | 0.05 | 0.63 | 769 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2027 | 0.16 | 0.15 | 0.82 | 3.13 | < 0.005 | 0.01 | 18.6 | 18.6 | 0.01 | 1.90 | 1.91 | — | 746 | 746 | 0.02 | 0.05 | 0.57 | 761 |
| 2028 | 0.16 | 0.15 | 0.79 | 3.07 | < 0.005 | 0.01 | 18.6 | 18.6 | 0.01 | 1.90 | 1.91 | — | 738 | 738 | 0.02 | 0.05 | 0.52 | 753 |
| 2029 | 0.11 | 0.78 | 0.61 | 2.48 | < 0.005 | 0.01 | 13.3 | 13.3 | 0.01 | 1.36 | 1.37 | — | 559 | 559 | 0.01 | 0.03 | 0.33 | 569 |
| 2030 | 0.01 | 4.05 | 0.02 | 0.08 | < 0.005 | < 0.005 | 0.75 | 0.75 | < 0.005 | 0.08 | 0.08 | — | 14.4 | 14.4 | < 0.005 | < 0.005 | 0.01 | 14.6 |

# 3. Construction Emissions Details

## 3.1. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 3.94 | 3.31 | 31.6 | 30.2 | 0.05 | 1.37 | — | 1.37 | 1.26 | — | 1.26 | — | 5,295 | 5,295 | 0.21 | 0.04 | — | 5,314 |
| Dust From Material Movement | — | — | — | — | — | — | 7.67 | 7.67 | — | 3.94 | 3.94 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.42 | 0.35 | 3.38 | 3.22 | 0.01 | 0.15 | — | 0.15 | 0.13 | — | 0.13 | — | 566 | 566 | 0.02 | < 0.005 | — | 568 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | 0.82 | 0.82 | — | 0.42 | 0.42 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.08 | 0.06 | 0.62 | 0.59 | < 0.005 | 0.03 | — | 0.03 | 0.02 | — | 0.02 | — | 93.7 | 93.7 | < 0.005 | < 0.005 | — | 94.0 |
| Dust From Material Movement | — | — | — | — | — | — | 0.15 | 0.15 | — | 0.08 | 0.08 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.09 | 0.08 | 0.06 | 1.10 | 0.00 | 0.00 | 10.9 | 10.9 | 0.00 | 1.11 | 1.11 | — | 196 | 196 | 0.01 | 0.01 | 0.76 | 199 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.09 | 0.00 | 0.00 | 1.13 | 1.13 | 0.00 | 0.11 | 0.11 | — | 19.3 | 19.3 | < 0.005 | < 0.005 | 0.03 | 19.6 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.02 | 0.00 | 0.00 | 0.21 | 0.21 | 0.00 | 0.02 | 0.02 | — | 3.19 | 3.19 | < 0.005 | < 0.005 | 0.01 | 3.24 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.2. Site Preparation (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.50 | 0.50 | 2.59 | 28.3 | 0.05 | 0.10 | — | 0.10 | 0.10 | — | 0.10 | — | 5,295 | 5,295 | 0.21 | 0.04 | — | 5,314 |
| Dust From Material Movement | — | — | — | — | — | — | 7.67 | 7.67 | — | 3.94 | 3.94 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.05 | 0.05 | 0.28 | 3.02 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 566 | 566 | 0.02 | < 0.005 | — | 568 |
| Dust From Material Movement | — | — | — | — | — | — | 0.82 | 0.82 | — | 0.42 | 0.42 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.05 | 0.55 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 93.7 | 93.7 | < 0.005 | < 0.005 | — | 94.0 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | 0.15 | 0.15 | — | 0.08 | 0.08 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.09 | 0.08 | 0.06 | 1.10 | 0.00 | 0.00 | 10.9 | 10.9 | 0.00 | 1.11 | 1.11 | — | 196 | 196 | 0.01 | 0.01 | 0.76 | 199 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.09 | 0.00 | 0.00 | 1.13 | 1.13 | 0.00 | 0.11 | 0.11 | — | 19.3 | 19.3 | < 0.005 | < 0.005 | 0.03 | 19.6 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.02 | 0.00 | 0.00 | 0.21 | 0.21 | 0.00 | 0.02 | 0.02 | — | 3.19 | 3.19 | < 0.005 | < 0.005 | 0.01 | 3.24 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.3. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 3.80 | 3.20 | 29.7 | 28.3 | 0.06 | 1.23 | — | 1.23 | 1.14 | — | 1.14 | — | 6,599 | 6,599 | 0.27 | 0.05 | — | 6,622 |
| Dust From Material Movement | — | — | — | — | — | — | 3.59 | 3.59 | — | 1.42 | 1.42 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 3.80 | 3.20 | 29.7 | 28.3 | 0.06 | 1.23 | — | 1.23 | 1.14 | — | 1.14 | — | 6,599 | 6,599 | 0.27 | 0.05 | — | 6,622 |
| Dust From Material Movement | — | — | — | — | — | — | 3.59 | 3.59 | — | 1.42 | 1.42 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.06 | 0.89 | 8.29 | 7.91 | 0.02 | 0.35 | — | 0.35 | 0.32 | — | 0.32 | — | 1,844 | 1,844 | 0.07 | 0.01 | — | 1,850 |
| Dust From Material Movement | — | — | — | — | — | — | 1.00 | 1.00 | — | 0.40 | 0.40 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.19 | 0.16 | 1.51 | 1.44 | < 0.005 | 0.06 | — | 0.06 | 0.06 | — | 0.06 | — | 305 | 305 | 0.01 | < 0.005 | — | 306 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | 0.18 | 0.18 | — | 0.07 | 0.07 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.10 | 0.10 | 0.07 | 1.26 | 0.00 | 0.00 | 12.4 | 12.4 | 0.00 | 1.26 | 1.26 | — | 224 | 224 | 0.01 | 0.01 | 0.87 | 228 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.09 | 0.09 | 0.09 | 0.99 | 0.00 | 0.00 | 12.4 | 12.4 | 0.00 | 1.26 | 1.26 | — | 202 | 202 | 0.01 | 0.01 | 0.02 | 204 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.02 | 0.02 | 0.28 | 0.00 | 0.00 | 3.37 | 3.37 | 0.00 | 0.34 | 0.34 | — | 57.6 | 57.6 | < 0.005 | < 0.005 | 0.10 | 58.4 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.05 | 0.00 | 0.00 | 0.61 | 0.61 | 0.00 | 0.06 | 0.06 | — | 9.54 | 9.54 | < 0.005 | < 0.005 | 0.02 | 9.68 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.4. Grading (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.64 | 0.64 | 4.43 | 35.3 | 0.06 | 0.12 | — | 0.12 | 0.12 | — | 0.12 | — | 6,599 | 6,599 | 0.27 | 0.05 | — | 6,622 |
| Dust From Material Movement | — | — | — | — | — | — | 3.59 | 3.59 | — | 1.42 | 1.42 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.64 | 0.64 | 4.43 | 35.3 | 0.06 | 0.12 | — | 0.12 | 0.12 | — | 0.12 | — | 6,599 | 6,599 | 0.27 | 0.05 | — | 6,622 |
| Dust From Material Movement | — | — | — | — | — | — | 3.59 | 3.59 | — | 1.42 | 1.42 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.18 | 0.18 | 1.24 | 9.88 | 0.02 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 1,844 | 1,844 | 0.07 | 0.01 | — | 1,850 |
| Dust From Material Movement | — | — | — | — | — | — | 1.00 | 1.00 | — | 0.40 | 0.40 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.03 | 0.23 | 1.80 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 305 | 305 | 0.01 | < 0.005 | — | 306 |
| Dust From Material Movement | — | — | — | — | — | — | 0.18 | 0.18 | — | 0.07 | 0.07 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.10 | 0.10 | 0.07 | 1.26 | 0.00 | 0.00 | 12.4 | 12.4 | 0.00 | 1.26 | 1.26 | — | 224 | 224 | 0.01 | 0.01 | 0.87 | 228 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.09 | 0.09 | 0.09 | 0.99 | 0.00 | 0.00 | 12.4 | 12.4 | 0.00 | 1.26 | 1.26 | — | 202 | 202 | 0.01 | 0.01 | 0.02 | 204 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.02 | 0.02 | 0.28 | 0.00 | 0.00 | 3.37 | 3.37 | 0.00 | 0.34 | 0.34 | — | 57.6 | 57.6 | < 0.005 | < 0.005 | 0.10 | 58.4 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.05 | 0.00 | 0.00 | 0.61 | 0.61 | 0.00 | 0.06 | 0.06 | — | 9.54 | 9.54 | < 0.005 | < 0.005 | 0.02 | 9.68 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.5. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.35 | 1.13 | 10.4 | 13.0 | 0.02 | 0.43 | — | 0.43 | 0.40 | — | 0.40 | — | 2,398 | 2,398 | 0.10 | 0.02 | — | 2,406 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.21 | 0.17 | 1.59 | 1.99 | < 0.005 | 0.07 | — | 0.07 | 0.06 | — | 0.06 | — | 366 | 366 | 0.01 | < 0.005 | — | 367 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.03 | 0.29 | 0.36 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 60.6 | 60.6 | < 0.005 | < 0.005 | — | 60.8 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.93 | 0.84 | 0.87 | 9.76 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 1,987 | 1,987 | 0.05 | 0.08 | 0.22 | 2,012 |
| Vendor | 0.07 | 0.06 | 3.24 | 0.55 | 0.01 | 0.02 | 24.5 | 24.6 | 0.02 | 2.53 | 2.55 | — | 2,019 | 2,019 | < 0.005 | 0.31 | 0.12 | 2,110 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.14 | 0.13 | 0.12 | 1.52 | 0.00 | 0.00 | 18.1 | 18.1 | 0.00 | 1.85 | 1.85 | — | 310 | 310 | 0.01 | 0.01 | 0.56 | 314 |
| Vendor | 0.01 | 0.01 | 0.49 | 0.08 | < 0.005 | < 0.005 | 3.64 | 3.64 | < 0.005 | 0.38 | 0.38 | — | 308 | 308 | < 0.005 | 0.05 | 0.32 | 322 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.02 | 0.02 | 0.28 | 0.00 | 0.00 | 3.30 | 3.30 | 0.00 | 0.34 | 0.34 | — | 51.3 | 51.3 | < 0.005 | < 0.005 | 0.09 | 52.0 |
| Vendor | < 0.005 | < 0.005 | 0.09 | 0.02 | < 0.005 | < 0.005 | 0.66 | 0.67 | < 0.005 | 0.07 | 0.07 | — | 51.0 | 51.0 | < 0.005 | 0.01 | 0.05 | 53.4 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.6. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.35 | 0.33 | 2.82 | 14.8 | 0.02 | 0.08 | — | 0.08 | 0.07 | — | 0.07 | — | 2,398 | 2,398 | 0.10 | 0.02 | — | 2,406 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 0.05 | 0.05 | 0.43 | 2.26 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 366 | 366 | 0.01 | < 0.005 | — | 367 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.08 | 0.41 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 60.6 | 60.6 | < 0.005 | < 0.005 | — | 60.8 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.93 | 0.84 | 0.87 | 9.76 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 1,987 | 1,987 | 0.05 | 0.08 | 0.22 | 2,012 |
| Vendor | 0.07 | 0.06 | 3.24 | 0.55 | 0.01 | 0.02 | 24.5 | 24.6 | 0.02 | 2.53 | 2.55 | — | 2,019 | 2,019 | < 0.005 | 0.31 | 0.12 | 2,110 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.14 | 0.13 | 0.12 | 1.52 | 0.00 | 0.00 | 18.1 | 18.1 | 0.00 | 1.85 | 1.85 | — | 310 | 310 | 0.01 | 0.01 | 0.56 | 314 |
| Vendor | 0.01 | 0.01 | 0.49 | 0.08 | < 0.005 | < 0.005 | 3.64 | 3.64 | < 0.005 | 0.38 | 0.38 | — | 308 | 308 | < 0.005 | 0.05 | 0.32 | 322 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.02 | 0.02 | 0.28 | 0.00 | 0.00 | 3.30 | 3.30 | 0.00 | 0.34 | 0.34 | — | 51.3 | 51.3 | < 0.005 | < 0.005 | 0.09 | 52.0 |
| Vendor | < 0.005 | < 0.005 | 0.09 | 0.02 | < 0.005 | < 0.005 | 0.66 | 0.67 | < 0.005 | 0.07 | 0.07 | — | 51.0 | 51.0 | < 0.005 | 0.01 | 0.05 | 53.4 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.7. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.28 | 1.07 | 9.85 | 13.0 | 0.02 | 0.38 | — | 0.38 | 0.35 | — | 0.35 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.28 | 1.07 | 9.85 | 13.0 | 0.02 | 0.38 | — | 0.38 | 0.35 | — | 0.35 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.91 | 0.77 | 7.04 | 9.26 | 0.02 | 0.27 | — | 0.27 | 0.25 | — | 0.25 | — | 1,712 | 1,712 | 0.07 | 0.01 | — | 1,718 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.17 | 0.14 | 1.28 | 1.69 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 283 | 283 | 0.01 | < 0.005 | — | 284 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.98 | 0.90 | 0.58 | 11.6 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 2,167 | 2,167 | 0.03 | 0.08 | 7.82 | 2,199 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.06 | 0.06 | 2.87 | 0.50 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,987 | 1,987 | < 0.005 | 0.31 | 4.44 | 2,083 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.90 | 0.81 | 0.80 | 9.09 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 1,950 | 1,950 | 0.05 | 0.08 | 0.20 | 1,976 |
| Vendor | 0.06 | 0.06 | 3.03 | 0.53 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,987 | 1,987 | < 0.005 | 0.31 | 0.12 | 2,079 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.64 | 0.58 | 0.52 | 6.59 | 0.00 | 0.00 | 84.7 | 84.7 | 0.00 | 8.64 | 8.64 | — | 1,423 | 1,423 | 0.03 | 0.06 | 2.41 | 1,443 |
| Vendor | 0.04 | 0.04 | 2.14 | 0.37 | 0.01 | 0.01 | 17.0 | 17.0 | 0.01 | 1.76 | 1.77 | — | 1,419 | 1,419 | < 0.005 | 0.22 | 1.37 | 1,486 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.12 | 0.11 | 0.09 | 1.20 | 0.00 | 0.00 | 15.5 | 15.5 | 0.00 | 1.58 | 1.58 | — | 236 | 236 | 0.01 | 0.01 | 0.40 | 239 |
| Vendor | 0.01 | 0.01 | 0.39 | 0.07 | < 0.005 | < 0.005 | 3.11 | 3.11 | < 0.005 | 0.32 | 0.32 | — | 235 | 235 | < 0.005 | 0.04 | 0.23 | 246 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.8. Building Construction (2026) - Mitigated

### Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.35 | 0.33 | 2.82 | 14.8 | 0.02 | 0.07 | — | 0.07 | 0.07 | — | 0.07 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.35 | 0.33 | 2.82 | 14.8 | 0.02 | 0.07 | — | 0.07 | 0.07 | — | 0.07 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.25 | 0.23 | 2.01 | 10.6 | 0.02 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 1,712 | 1,712 | 0.07 | 0.01 | — | 1,718 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.05 | 0.04 | 0.37 | 1.93 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 283 | 283 | 0.01 | < 0.005 | — | 284 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.98 | 0.90 | 0.58 | 11.6 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 2,167 | 2,167 | 0.03 | 0.08 | 7.82 | 2,199 |
| Vendor | 0.06 | 0.06 | 2.87 | 0.50 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,987 | 1,987 | < 0.005 | 0.31 | 4.44 | 2,083 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.90 | 0.81 | 0.80 | 9.09 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 1,950 | 1,950 | 0.05 | 0.08 | 0.20 | 1,976 |
| Vendor | 0.06 | 0.06 | 3.03 | 0.53 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,987 | 1,987 | < 0.005 | 0.31 | 0.12 | 2,079 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.64 | 0.58 | 0.52 | 6.59 | 0.00 | 0.00 | 84.7 | 84.7 | 0.00 | 8.64 | 8.64 | — | 1,423 | 1,423 | 0.03 | 0.06 | 2.41 | 1,443 |
| Vendor | 0.04 | 0.04 | 2.14 | 0.37 | 0.01 | 0.01 | 17.0 | 17.0 | 0.01 | 1.76 | 1.77 | — | 1,419 | 1,419 | < 0.005 | 0.22 | 1.37 | 1,486 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.12 | 0.11 | 0.09 | 1.20 | 0.00 | 0.00 | 15.5 | 15.5 | 0.00 | 1.58 | 1.58 | — | 236 | 236 | 0.01 | 0.01 | 0.40 | 239 |
| Vendor | 0.01 | 0.01 | 0.39 | 0.07 | < 0.005 | < 0.005 | 3.11 | 3.11 | < 0.005 | 0.32 | 0.32 | — | 235 | 235 | < 0.005 | 0.04 | 0.23 | 246 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.9. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.23 | 1.03 | 9.39 | 12.9 | 0.02 | 0.34 | — | 0.34 | 0.31 | — | 0.31 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.23 | 1.03 | 9.39 | 12.9 | 0.02 | 0.34 | — | 0.34 | 0.31 | — | 0.31 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.88 | 0.74 | 6.71 | 9.24 | 0.02 | 0.24 | — | 0.24 | 0.22 | — | 0.22 | — | 1,712 | 1,712 | 0.07 | 0.01 | — | 1,718 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.16 | 0.13 | 1.22 | 1.69 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 283 | 283 | 0.01 | < 0.005 | — | 284 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.94 | 0.86 | 0.57 | 10.9 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 2,131 | 2,131 | 0.03 | 0.08 | 7.12 | 2,161 |
| Vendor | 0.06 | 0.05 | 2.71 | 0.49 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,950 | 1,950 | < 0.005 | 0.29 | 4.04 | 2,042 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.81 | 0.78 | 0.73 | 8.50 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 1,918 | 1,918 | 0.05 | 0.08 | 0.18 | 1,943 |
| Vendor | 0.06 | 0.04 | 2.86 | 0.52 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,950 | 1,950 | < 0.005 | 0.29 | 0.10 | 2,038 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.58 | 0.56 | 0.47 | 6.19 | 0.00 | 0.00 | 84.7 | 84.7 | 0.00 | 8.64 | 8.64 | — | 1,400 | 1,400 | 0.03 | 0.06 | 2.20 | 1,420 |
| Vendor | 0.04 | 0.03 | 2.02 | 0.36 | 0.01 | 0.01 | 17.0 | 17.0 | 0.01 | 1.76 | 1.77 | — | 1,393 | 1,393 | < 0.005 | 0.21 | 1.25 | 1,457 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.10 | 0.10 | 0.09 | 1.13 | 0.00 | 0.00 | 15.5 | 15.5 | 0.00 | 1.58 | 1.58 | — | 232 | 232 | 0.01 | 0.01 | 0.36 | 235 |
| Vendor | 0.01 | 0.01 | 0.37 | 0.07 | < 0.005 | < 0.005 | 3.11 | 3.11 | < 0.005 | 0.32 | 0.32 | — | 231 | 231 | < 0.005 | 0.03 | 0.21 | 241 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.10. Building Construction (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.35 | 0.33 | 2.82 | 14.8 | 0.02 | 0.07 | — | 0.07 | 0.07 | — | 0.07 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.35 | 0.33 | 2.82 | 14.8 | 0.02 | 0.07 | — | 0.07 | 0.07 | — | 0.07 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.25 | 0.23 | 2.01 | 10.6 | 0.02 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 1,712 | 1,712 | 0.07 | 0.01 | — | 1,718 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.05 | 0.04 | 0.37 | 1.93 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 283 | 283 | 0.01 | < 0.005 | — | 284 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.94 | 0.86 | 0.57 | 10.9 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 2,131 | 2,131 | 0.03 | 0.08 | 7.12 | 2,161 |
| Vendor | 0.06 | 0.05 | 2.71 | 0.49 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,950 | 1,950 | < 0.005 | 0.29 | 4.04 | 2,042 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.81 | 0.78 | 0.73 | 8.50 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 1,918 | 1,918 | 0.05 | 0.08 | 0.18 | 1,943 |
| Vendor | 0.06 | 0.04 | 2.86 | 0.52 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,950 | 1,950 | < 0.005 | 0.29 | 0.10 | 2,038 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.58 | 0.56 | 0.47 | 6.19 | 0.00 | 0.00 | 84.7 | 84.7 | 0.00 | 8.64 | 8.64 | — | 1,400 | 1,400 | 0.03 | 0.06 | 2.20 | 1,420 |
| Vendor | 0.04 | 0.03 | 2.02 | 0.36 | 0.01 | 0.01 | 17.0 | 17.0 | 0.01 | 1.76 | 1.77 | — | 1,393 | 1,393 | < 0.005 | 0.21 | 1.25 | 1,457 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.10 | 0.10 | 0.09 | 1.13 | 0.00 | 0.00 | 15.5 | 15.5 | 0.00 | 1.58 | 1.58 | — | 232 | 232 | 0.01 | 0.01 | 0.36 | 235 |
| Vendor | 0.01 | 0.01 | 0.37 | 0.07 | < 0.005 | < 0.005 | 3.11 | 3.11 | < 0.005 | 0.32 | 0.32 | — | 231 | 231 | < 0.005 | 0.03 | 0.21 | 241 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.11. Building Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 1.18 | 0.99 | 8.92 | 12.9 | 0.02 | 0.30 | — | 0.30 | 0.28 | — | 0.28 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,406 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.18 | 0.99 | 8.92 | 12.9 | 0.02 | 0.30 | — | 0.30 | 0.28 | — | 0.28 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,406 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.85 | 0.71 | 6.39 | 9.26 | 0.02 | 0.22 | — | 0.22 | 0.20 | — | 0.20 | — | 1,717 | 1,717 | 0.07 | 0.01 | — | 1,723 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.15 | 0.13 | 1.17 | 1.69 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 284 | 284 | 0.01 | < 0.005 | — | 285 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.84 | 0.83 | 0.51 | 10.2 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 2,089 | 2,089 | 0.03 | 0.08 | 6.47 | 2,119 |
| Vendor | 0.06 | 0.05 | 2.55 | 0.47 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,904 | 1,904 | < 0.005 | 0.29 | 3.64 | 1,996 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.77 | 0.69 | 0.66 | 7.97 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 1,881 | 1,881 | 0.04 | 0.08 | 0.17 | 1,906 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.06 | 0.04 | 2.69 | 0.49 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,905 | 1,905 | < 0.005 | 0.29 | 0.09 | 1,992 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.56 | 0.54 | 0.42 | 5.85 | 0.00 | 0.00 | 85.0 | 85.0 | 0.00 | 8.66 | 8.66 | — | 1,376 | 1,376 | 0.03 | 0.06 | 2.00 | 1,396 |
| Vendor | 0.04 | 0.03 | 1.90 | 0.34 | 0.01 | 0.01 | 17.1 | 17.1 | 0.01 | 1.76 | 1.77 | — | 1,364 | 1,364 | < 0.005 | 0.21 | 1.12 | 1,428 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.10 | 0.10 | 0.08 | 1.07 | 0.00 | 0.00 | 15.5 | 15.5 | 0.00 | 1.58 | 1.58 | — | 228 | 228 | < 0.005 | 0.01 | 0.33 | 231 |
| Vendor | 0.01 | 0.01 | 0.35 | 0.06 | < 0.005 | < 0.005 | 3.12 | 3.12 | < 0.005 | 0.32 | 0.32 | — | 226 | 226 | < 0.005 | 0.03 | 0.19 | 236 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.12. Building Construction (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.35 | 0.33 | 2.81 | 14.8 | 0.02 | 0.07 | — | 0.07 | 0.07 | — | 0.07 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,406 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.35 | 0.33 | 2.81 | 14.8 | 0.02 | 0.07 | — | 0.07 | 0.07 | — | 0.07 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,406 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.25 | 0.24 | 2.02 | 10.6 | 0.02 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 1,717 | 1,717 | 0.07 | 0.01 | — | 1,723 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.05 | 0.04 | 0.37 | 1.94 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 284 | 284 | 0.01 | < 0.005 | — | 285 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.84 | 0.83 | 0.51 | 10.2 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 2,089 | 2,089 | 0.03 | 0.08 | 6.47 | 2,119 |
| Vendor | 0.06 | 0.05 | 2.55 | 0.47 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,904 | 1,904 | < 0.005 | 0.29 | 3.64 | 1,996 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.77 | 0.69 | 0.66 | 7.97 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 1,881 | 1,881 | 0.04 | 0.08 | 0.17 | 1,906 |
| Vendor | 0.06 | 0.04 | 2.69 | 0.49 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,905 | 1,905 | < 0.005 | 0.29 | 0.09 | 1,992 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.56 | 0.54 | 0.42 | 5.85 | 0.00 | 0.00 | 85.0 | 85.0 | 0.00 | 8.66 | 8.66 | — | 1,376 | 1,376 | 0.03 | 0.06 | 2.00 | 1,396 |
| Vendor | 0.04 | 0.03 | 1.90 | 0.34 | 0.01 | 0.01 | 17.1 | 17.1 | 0.01 | 1.76 | 1.77 | — | 1,364 | 1,364 | < 0.005 | 0.21 | 1.12 | 1,428 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.10 | 0.10 | 0.08 | 1.07 | 0.00 | 0.00 | 15.5 | 15.5 | 0.00 | 1.58 | 1.58 | — | 228 | 228 | < 0.005 | 0.01 | 0.33 | 231 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.01 | 0.01 | 0.35 | 0.06 | < 0.005 | < 0.005 | 3.12 | 3.12 | < 0.005 | 0.32 | 0.32 | — | 226 | 226 | < 0.005 | 0.03 | 0.19 | 236 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.13. Building Construction (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.15 | 0.97 | 8.58 | 12.9 | 0.02 | 0.28 | — | 0.28 | 0.25 | — | 0.25 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.15 | 0.97 | 8.58 | 12.9 | 0.02 | 0.28 | — | 0.28 | 0.25 | — | 0.25 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.57 | 0.48 | 4.25 | 6.39 | 0.01 | 0.14 | — | 0.14 | 0.13 | — | 0.13 | — | 1,187 | 1,187 | 0.05 | 0.01 | — | 1,191 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.10 | 0.09 | 0.78 | 1.17 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 196 | 196 | 0.01 | < 0.005 | — | 197 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.81 | 0.74 | 0.44 | 9.57 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 2,054 | 2,054 | 0.03 | 0.08 | 5.84 | 2,083 |
| Vendor | 0.06 | 0.05 | 2.39 | 0.46 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,850 | 1,850 | < 0.005 | 0.28 | 3.25 | 1,938 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.75 | 0.67 | 0.59 | 7.46 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 1,850 | 1,850 | 0.04 | 0.08 | 0.15 | 1,874 |
| Vendor | 0.06 | 0.04 | 2.52 | 0.48 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,851 | 1,851 | < 0.005 | 0.28 | 0.08 | 1,935 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.37 | 0.33 | 0.29 | 3.77 | 0.00 | 0.00 | 58.7 | 58.7 | 0.00 | 5.99 | 5.99 | — | 935 | 935 | 0.02 | 0.04 | 1.25 | 948 |
| Vendor | 0.03 | 0.02 | 1.24 | 0.23 | 0.01 | 0.01 | 11.8 | 11.8 | 0.01 | 1.22 | 1.22 | — | 916 | 916 | < 0.005 | 0.14 | 0.70 | 958 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.07 | 0.06 | 0.05 | 0.69 | 0.00 | 0.00 | 10.7 | 10.7 | 0.00 | 1.09 | 1.09 | — | 155 | 155 | < 0.005 | 0.01 | 0.21 | 157 |
| Vendor | 0.01 | < 0.005 | 0.23 | 0.04 | < 0.005 | < 0.005 | 2.16 | 2.16 | < 0.005 | 0.22 | 0.22 | — | 152 | 152 | < 0.005 | 0.02 | 0.12 | 159 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.14. Building Construction (2029) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 0.35 | 0.33 | 2.81 | 14.8 | 0.02 | 0.07 | — | 0.07 | 0.07 | — | 0.07 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.35 | 0.33 | 2.81 | 14.8 | 0.02 | 0.07 | — | 0.07 | 0.07 | — | 0.07 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.17 | 0.16 | 1.39 | 7.34 | 0.01 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 1,187 | 1,187 | 0.05 | 0.01 | — | 1,191 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.03 | 0.25 | 1.34 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 196 | 196 | 0.01 | < 0.005 | — | 197 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.81 | 0.74 | 0.44 | 9.57 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 2,054 | 2,054 | 0.03 | 0.08 | 5.84 | 2,083 |
| Vendor | 0.06 | 0.05 | 2.39 | 0.46 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,850 | 1,850 | < 0.005 | 0.28 | 3.25 | 1,938 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.75 | 0.67 | 0.59 | 7.46 | 0.00 | 0.00 | 122 | 122 | 0.00 | 12.4 | 12.4 | — | 1,850 | 1,850 | 0.04 | 0.08 | 0.15 | 1,874 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.06 | 0.04 | 2.52 | 0.48 | 0.01 | 0.01 | 24.5 | 24.6 | 0.01 | 2.53 | 2.54 | — | 1,851 | 1,851 | < 0.005 | 0.28 | 0.08 | 1,935 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.37 | 0.33 | 0.29 | 3.77 | 0.00 | 0.00 | 58.7 | 58.7 | 0.00 | 5.99 | 5.99 | — | 935 | 935 | 0.02 | 0.04 | 1.25 | 948 |
| Vendor | 0.03 | 0.02 | 1.24 | 0.23 | 0.01 | 0.01 | 11.8 | 11.8 | 0.01 | 1.22 | 1.22 | — | 916 | 916 | < 0.005 | 0.14 | 0.70 | 958 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.07 | 0.06 | 0.05 | 0.69 | 0.00 | 0.00 | 10.7 | 10.7 | 0.00 | 1.09 | 1.09 | — | 155 | 155 | < 0.005 | 0.01 | 0.21 | 157 |
| Vendor | 0.01 | < 0.005 | 0.23 | 0.04 | < 0.005 | < 0.005 | 2.16 | 2.16 | < 0.005 | 0.22 | 0.22 | — | 152 | 152 | < 0.005 | 0.02 | 0.12 | 159 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.15. Paving (2029) - Unmitigated

### Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.80 | 0.67 | 6.46 | 9.92 | 0.01 | 0.24 | — | 0.24 | 0.22 | — | 0.22 | — | 1,511 | 1,511 | 0.06 | 0.01 | — | 1,516 |
| Paving | — | 3.58 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.80 | 0.67 | 6.46 | 9.92 | 0.01 | 0.24 | — | 0.24 | 0.22 | — | 0.22 | — | 1,511 | 1,511 | 0.06 | 0.01 | — | 1,516 |
| Paving | — | 3.58 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.16 | 0.13 | 1.27 | 1.96 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 298 | 298 | 0.01 | < 0.005 | — | 299 |
| Paving | — | 0.71 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.23 | 0.36 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 49.3 | 49.3 | < 0.005 | < 0.005 | — | 49.5 |
| Paving | — | 0.13 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.06 | 0.06 | 0.03 | 0.73 | 0.00 | 0.00 | 9.30 | 9.30 | 0.00 | 0.95 | 0.95 | — | 157 | 157 | < 0.005 | 0.01 | 0.44 | 159 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.06 | 0.05 | 0.05 | 0.57 | 0.00 | 0.00 | 9.30 | 9.30 | 0.00 | 0.95 | 0.95 | — | 141 | 141 | < 0.005 | 0.01 | 0.01 | 143 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.11 | 0.00 | 0.00 | 1.78 | 1.78 | 0.00 | 0.18 | 0.18 | — | 28.4 | 28.4 | < 0.005 | < 0.005 | 0.04 | 28.8 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.02 | 0.00 | 0.00 | 0.33 | 0.33 | 0.00 | 0.03 | 0.03 | — | 4.70 | 4.70 | < 0.005 | < 0.005 | 0.01 | 4.77 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.16. Paving (2029) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.16 | 0.16 | 1.93 | 10.6 | 0.01 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 1,511 | 1,511 | 0.06 | 0.01 | — | 1,516 |
| Paving | — | 3.58 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.16 | 0.16 | 1.93 | 10.6 | 0.01 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 1,511 | 1,511 | 0.06 | 0.01 | — | 1,516 |
| Paving | — | 3.58 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.03 | 0.38 | 2.09 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 298 | 298 | 0.01 | < 0.005 | — | 299 |
| Paving | — | 0.71 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.07 | 0.38 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 49.3 | 49.3 | < 0.005 | < 0.005 | — | 49.5 |
| Paving | — | 0.13 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.06 | 0.06 | 0.03 | 0.73 | 0.00 | 0.00 | 9.30 | 9.30 | 0.00 | 0.95 | 0.95 | — | 157 | 157 | < 0.005 | 0.01 | 0.44 | 159 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.06 | 0.05 | 0.05 | 0.57 | 0.00 | 0.00 | 9.30 | 9.30 | 0.00 | 0.95 | 0.95 | — | 141 | 141 | < 0.005 | 0.01 | 0.01 | 143 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.11 | 0.00 | 0.00 | 1.78 | 1.78 | 0.00 | 0.18 | 0.18 | — | 28.4 | 28.4 | < 0.005 | < 0.005 | 0.04 | 28.8 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.02 | 0.00 | 0.00 | 0.33 | 0.33 | 0.00 | 0.03 | 0.03 | — | 4.70 | 4.70 | < 0.005 | < 0.005 | 0.01 | 4.77 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.17. Architectural Coating (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.12 | 0.10 | 0.79 | 1.11 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 134 | 134 | 0.01 | < 0.005 | — | 134 |
| Architectural Coatings | — | 129 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.02 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 3.14 | 3.14 | < 0.005 | < 0.005 | — | 3.15 |
| Architectural Coatings | — | 3.02 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.52 | 0.52 | < 0.005 | < 0.005 | — | 0.52 |
| Architectural Coatings | — | 0.55 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.15 | 0.13 | 0.12 | 1.49 | 0.00 | 0.00 | 24.4 | 24.4 | 0.00 | 2.49 | 2.49 | — | 370 | 370 | 0.01 | 0.02 | 0.03 | 375 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.04 | 0.00 | 0.00 | 0.56 | 0.56 | 0.00 | 0.06 | 0.06 | — | 8.87 | 8.87 | < 0.005 | < 0.005 | 0.01 | 9.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.01 | 0.01 | — | 1.47 | 1.47 | < 0.005 | < 0.005 | < 0.005 | 1.49 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.18. Architectural Coating (2029) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.65 | 0.96 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 134 | 134 | 0.01 | < 0.005 | — | 134 |
| Architectural Coatings | — | 129 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 3.14 | 3.14 | < 0.005 | < 0.005 | — | 3.15 |
| Architectural Coatings | — | 3.02 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.52 | 0.52 | < 0.005 | < 0.005 | — | 0.52 |
| Architectural Coatings | — | 0.55 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.15 | 0.13 | 0.12 | 1.49 | 0.00 | 0.00 | 24.4 | 24.4 | 0.00 | 2.49 | 2.49 | — | 370 | 370 | 0.01 | 0.02 | 0.03 | 375 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.04 | 0.00 | 0.00 | 0.56 | 0.56 | 0.00 | 0.06 | 0.06 | — | 8.87 | 8.87 | < 0.005 | < 0.005 | 0.01 | 9.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.01 | 0.01 | — | 1.47 | 1.47 | < 0.005 | < 0.005 | < 0.005 | 1.49 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.19. Architectural Coating (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.12 | 0.10 | 0.78 | 1.11 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 134 | 134 | 0.01 | < 0.005 | — | 134 |
| Architectural Coatings | — | 129 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 0.02 | 0.02 | 0.14 | 0.19 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 23.0 | 23.0 | < 0.005 | < 0.005 | — | 23.1 |
| Architectural Coatings | — | 22.2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.02 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 3.81 | 3.81 | < 0.005 | < 0.005 | — | 3.82 |
| Architectural Coatings | — | 4.04 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.14 | 0.13 | 0.10 | 1.40 | 0.00 | 0.00 | 24.4 | 24.4 | 0.00 | 2.49 | 2.49 | — | 364 | 364 | 0.01 | 0.02 | 0.03 | 369 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.02 | 0.02 | 0.02 | 0.25 | 0.00 | 0.00 | 4.09 | 4.09 | 0.00 | 0.42 | 0.42 | — | 64.0 | 64.0 | < 0.005 | < 0.005 | 0.08 | 64.9 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.04 | 0.00 | 0.00 | 0.75 | 0.75 | 0.00 | 0.08 | 0.08 | — | 10.6 | 10.6 | < 0.005 | < 0.005 | 0.01 | 10.7 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.20. Architectural Coating (2030) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.65 | 0.96 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 134 | 134 | 0.01 | < 0.005 | — | 134 |
| Architectural Coatings | — | 129 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.11 | 0.17 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 23.0 | 23.0 | < 0.005 | < 0.005 | — | 23.1 |
| Architectural Coatings | — | 22.2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.02 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 3.81 | 3.81 | < 0.005 | < 0.005 | — | 3.82 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Architect Coatings | — | 4.04 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.14 | 0.13 | 0.10 | 1.40 | 0.00 | 0.00 | 24.4 | 24.4 | 0.00 | 2.49 | 2.49 | — | 364 | 364 | 0.01 | 0.02 | 0.03 | 369 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.02 | 0.02 | 0.02 | 0.25 | 0.00 | 0.00 | 4.09 | 4.09 | 0.00 | 0.42 | 0.42 | — | 64.0 | 64.0 | < 0.005 | < 0.005 | 0.08 | 64.9 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.04 | 0.00 | 0.00 | 0.75 | 0.75 | 0.00 | 0.08 | 0.08 | — | 10.6 | 10.6 | < 0.005 | < 0.005 | 0.01 | 10.7 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.21. Linear, Grubbing & Land Clearing (2025) - Unmitigated

### Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.93 | 0.78 | 6.78 | 6.98 | 0.01 | 0.42 | — | 0.42 | 0.39 | — | 0.39 | — | 981 | 981 | 0.04 | 0.01 | — | 984 |
| Dust From Material Movement | — | — | — | — | — | — | 0.41 | 0.41 | — | 0.04 | 0.04 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.09 | 0.07 | 0.65 | 0.67 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 94.0 | 94.0 | < 0.005 | < 0.005 | — | 94.4 |
| Dust From Material Movement | — | — | — | — | — | — | 0.04 | 0.04 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.01 | 0.12 | 0.12 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 15.6 | 15.6 | < 0.005 | < 0.005 | — | 15.6 |
| Dust From Material Movement | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.34 | 0.31 | 0.21 | 4.09 | 0.00 | 0.00 | 40.3 | 40.3 | 0.00 | 4.11 | 4.11 | — | 729 | 729 | 0.03 | 0.03 | 2.82 | 741 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.03 | 0.31 | 0.00 | 0.00 | 3.76 | 3.76 | 0.00 | 0.38 | 0.38 | — | 64.3 | 64.3 | < 0.005 | < 0.005 | 0.12 | 65.2 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | < 0.005 | < 0.005 | 0.06 | 0.00 | 0.00 | 0.69 | 0.69 | 0.00 | 0.07 | 0.07 | — | 10.6 | 10.6 | < 0.005 | < 0.005 | 0.02 | 10.8 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.22. Linear, Grubbing & Land Clearing (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.11 | 0.11 | 1.67 | 6.86 | 0.01 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 981 | 981 | 0.04 | 0.01 | — | 984 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | 0.41 | 0.41 | — | 0.04 | 0.04 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.16 | 0.66 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 94.0 | 94.0 | < 0.005 | < 0.005 | — | 94.4 |
| Dust From Material Movement | — | — | — | — | — | — | 0.04 | 0.04 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.03 | 0.12 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 15.6 | 15.6 | < 0.005 | < 0.005 | — | 15.6 |
| Dust From Material Movement | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.34 | 0.31 | 0.21 | 4.09 | 0.00 | 0.00 | 40.3 | 40.3 | 0.00 | 4.11 | 4.11 | — | 729 | 729 | 0.03 | 0.03 | 2.82 | 741 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.03 | 0.31 | 0.00 | 0.00 | 3.76 | 3.76 | 0.00 | 0.38 | 0.38 | — | 64.3 | 64.3 | < 0.005 | < 0.005 | 0.12 | 65.2 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | < 0.005 | < 0.005 | 0.06 | 0.00 | 0.00 | 0.69 | 0.69 | 0.00 | 0.07 | 0.07 | — | 10.6 | 10.6 | < 0.005 | < 0.005 | 0.02 | 10.8 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.23. Linear, Grading & Excavation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 7.41 | 6.23 | 54.6 | 58.8 | 0.12 | 2.41 | — | 2.41 | 2.22 | — | 2.22 | — | 12,991 | 12,991 | 0.53 | 0.11 | — | 13,036 |
| Dust From Material Movement | — | — | — | — | — | — | 2.48 | 2.48 | — | 0.27 | 0.27 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.71 | 0.60 | 5.23 | 5.64 | 0.01 | 0.23 | — | 0.23 | 0.21 | — | 0.21 | — | 1,246 | 1,246 | 0.05 | 0.01 | — | 1,250 |
| Dust From Material Movement | — | — | — | — | — | — | 0.24 | 0.24 | — | 0.03 | 0.03 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.13 | 0.11 | 0.96 | 1.03 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 206 | 206 | 0.01 | < 0.005 | — | 207 |
| Dust From Material Movement | — | — | — | — | — | — | 0.04 | 0.04 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.60 | 0.55 | 0.38 | 7.23 | 0.00 | 0.00 | 71.3 | 71.3 | 0.00 | 7.27 | 7.27 | — | 1,290 | 1,290 | 0.06 | 0.05 | 4.99 | 1,310 |
| Vendor | < 0.005 | < 0.005 | 0.10 | 0.02 | < 0.005 | < 0.005 | 0.77 | 0.77 | < 0.005 | 0.08 | 0.08 | — | 63.0 | 63.0 | < 0.005 | 0.01 | 0.15 | 66.0 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.04 | 0.56 | 0.00 | 0.00 | 6.65 | 6.65 | 0.00 | 0.68 | 0.68 | — | 114 | 114 | < 0.005 | < 0.005 | 0.21 | 115 |
| Vendor | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | 0.07 | 0.07 | < 0.005 | 0.01 | 0.01 | — | 6.04 | 6.04 | < 0.005 | < 0.005 | 0.01 | 6.32 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.10 | 0.00 | 0.00 | 1.21 | 1.21 | 0.00 | 0.12 | 0.12 | — | 18.8 | 18.8 | < 0.005 | < 0.005 | 0.03 | 19.1 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 1.00 | 1.00 | < 0.005 | < 0.005 | < 0.005 | 1.05 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.24. Linear, Grading & Excavation (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.31 | 1.31 | 12.3 | 75.1 | 0.12 | 0.24 | — | 0.24 | 0.24 | — | 0.24 | — | 12,991 | 12,991 | 0.53 | 0.11 | — | 13,036 |
| Dust From Material Movement | — | — | — | — | — | — | 2.48 | 2.48 | — | 0.27 | 0.27 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.13 | 0.13 | 1.18 | 7.20 | 0.01 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 1,246 | 1,246 | 0.05 | 0.01 | — | 1,250 |
| Dust From Material Movement | — | — | — | — | — | — | 0.24 | 0.24 | — | 0.03 | 0.03 | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.22 | 1.31 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 206 | 206 | 0.01 | < 0.005 | — | 207 |
| Dust From Material Movement | — | — | — | — | — | — | 0.04 | 0.04 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.60 | 0.55 | 0.38 | 7.23 | 0.00 | 0.00 | 71.3 | 71.3 | 0.00 | 7.27 | 7.27 | — | 1,290 | 1,290 | 0.06 | 0.05 | 4.99 | 1,310 |
| Vendor | < 0.005 | < 0.005 | 0.10 | 0.02 | < 0.005 | < 0.005 | 0.77 | 0.77 | < 0.005 | 0.08 | 0.08 | — | 63.0 | 63.0 | < 0.005 | 0.01 | 0.15 | 66.0 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.04 | 0.56 | 0.00 | 0.00 | 6.65 | 6.65 | 0.00 | 0.68 | 0.68 | — | 114 | 114 | < 0.005 | < 0.005 | 0.21 | 115 |
| Vendor | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | 0.07 | 0.07 | < 0.005 | 0.01 | 0.01 | — | 6.04 | 6.04 | < 0.005 | < 0.005 | 0.01 | 6.32 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.10 | 0.00 | 0.00 | 1.21 | 1.21 | 0.00 | 0.12 | 0.12 | — | 18.8 | 18.8 | < 0.005 | < 0.005 | 0.03 | 19.1 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 1.00 | 1.00 | < 0.005 | < 0.005 | < 0.005 | 1.05 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.25. Linear, Drainage, Utilities, & Sub-Grade (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 5.99 | 5.02 | 45.9 | 47.3 | 0.11 | 1.83 | — | 1.83 | 1.68 | — | 1.68 | — | 11,387 | 11,387 | 0.46 | 0.09 | — | 11,426 |
| Dust From Material Movement | — | — | — | — | — | — | 2.07 | 2.07 | — | 0.22 | 0.22 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.57 | 0.48 | 4.40 | 4.53 | 0.01 | 0.18 | — | 0.18 | 0.16 | — | 0.16 | — | 1,092 | 1,092 | 0.04 | 0.01 | — | 1,096 |
| Dust From Material Movement | — | — | — | — | — | — | 0.20 | 0.20 | — | 0.02 | 0.02 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.10 | 0.09 | 0.80 | 0.83 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 181 | 181 | 0.01 | < 0.005 | — | 181 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | 0.04 | 0.04 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.55 | 0.50 | 0.35 | 6.60 | 0.00 | 0.00 | 65.1 | 65.1 | 0.00 | 6.64 | 6.64 | — | 1,178 | 1,178 | 0.05 | 0.04 | 4.55 | 1,196 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.04 | 0.04 | 0.51 | 0.00 | 0.00 | 6.07 | 6.07 | 0.00 | 0.62 | 0.62 | — | 104 | 104 | < 0.005 | < 0.005 | 0.19 | 105 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.09 | 0.00 | 0.00 | 1.11 | 1.11 | 0.00 | 0.11 | 0.11 | — | 17.2 | 17.2 | < 0.005 | < 0.005 | 0.03 | 17.4 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.26. Linear, Drainage, Utilities, & Sub-Grade (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.58 | 1.49 | 10.3 | 63.2 | 0.11 | 0.34 | — | 0.34 | 0.33 | — | 0.33 | — | 11,387 | 11,387 | 0.46 | 0.09 | — | 11,426 |
| Dust From Material Movement | — | — | — | — | — | — | 2.07 | 2.07 | — | 0.22 | 0.22 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.15 | 0.14 | 0.98 | 6.06 | 0.01 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 1,092 | 1,092 | 0.04 | 0.01 | — | 1,096 |
| Dust From Material Movement | — | — | — | — | — | — | 0.20 | 0.20 | — | 0.02 | 0.02 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.03 | 0.18 | 1.11 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 181 | 181 | 0.01 | < 0.005 | — | 181 |
| Dust From Material Movement | — | — | — | — | — | — | 0.04 | 0.04 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.55 | 0.50 | 0.35 | 6.60 | 0.00 | 0.00 | 65.1 | 65.1 | 0.00 | 6.64 | 6.64 | — | 1,178 | 1,178 | 0.05 | 0.04 | 4.55 | 1,196 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.04 | 0.04 | 0.51 | 0.00 | 0.00 | 6.07 | 6.07 | 0.00 | 0.62 | 0.62 | — | 104 | 104 | < 0.005 | < 0.005 | 0.19 | 105 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.09 | 0.00 | 0.00 | 1.11 | 1.11 | 0.00 | 0.11 | 0.11 | — | 17.2 | 17.2 | < 0.005 | < 0.005 | 0.03 | 17.4 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.27. Linear, Paving (2025) - Unmitigated

### Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 2.11 | 1.78 | 15.4 | 21.6 | 0.03 | 0.68 | — | 0.68 | 0.62 | — | 0.62 | — | 3,240 | 3,240 | 0.13 | 0.03 | — | 3,251 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 2.11 | 1.78 | 15.4 | 21.6 | 0.03 | 0.68 | — | 0.68 | 0.62 | — | 0.62 | — | 3,240 | 3,240 | 0.13 | 0.03 | — | 3,251 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.20 | 0.17 | 1.48 | 2.07 | < 0.005 | 0.07 | — | 0.07 | 0.06 | — | 0.06 | — | 311 | 311 | 0.01 | < 0.005 | — | 312 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.03 | 0.27 | 0.38 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 51.4 | 51.4 | < 0.005 | < 0.005 | — | 51.6 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.47 | 0.43 | 0.30 | 5.66 | 0.00 | 0.00 | 55.8 | 55.8 | 0.00 | 5.69 | 5.69 | — | 1,010 | 1,010 | 0.05 | 0.04 | 3.90 | 1,025 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.43 | 0.39 | 0.40 | 4.46 | 0.00 | 0.00 | 55.8 | 55.8 | 0.00 | 5.69 | 5.69 | — | 908 | 908 | 0.02 | 0.04 | 0.10 | 920 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.04 | 0.04 | 0.03 | 0.44 | 0.00 | 0.00 | 5.20 | 5.20 | 0.00 | 0.53 | 0.53 | — | 89.0 | 89.0 | < 0.005 | < 0.005 | 0.16 | 90.2 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.08 | 0.00 | 0.00 | 0.95 | 0.95 | 0.00 | 0.10 | 0.10 | — | 14.7 | 14.7 | < 0.005 | < 0.005 | 0.03 | 14.9 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.28. Linear, Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.36 | 0.36 | 5.16 | 22.7 | 0.03 | 0.06 | — | 0.06 | 0.06 | — | 0.06 | — | 3,240 | 3,240 | 0.13 | 0.03 | — | 3,251 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.36 | 0.36 | 5.16 | 22.7 | 0.03 | 0.06 | — | 0.06 | 0.06 | — | 0.06 | — | 3,240 | 3,240 | 0.13 | 0.03 | — | 3,251 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.03 | 0.49 | 2.17 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 311 | 311 | 0.01 | < 0.005 | — | 312 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.09 | 0.40 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 51.4 | 51.4 | < 0.005 | < 0.005 | — | 51.6 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.47 | 0.43 | 0.30 | 5.66 | 0.00 | 0.00 | 55.8 | 55.8 | 0.00 | 5.69 | 5.69 | — | 1,010 | 1,010 | 0.05 | 0.04 | 3.90 | 1,025 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.43 | 0.39 | 0.40 | 4.46 | 0.00 | 0.00 | 55.8 | 55.8 | 0.00 | 5.69 | 5.69 | — | 908 | 908 | 0.02 | 0.04 | 0.10 | 920 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.03 | 0.44 | 0.00 | 0.00 | 5.20 | 5.20 | 0.00 | 0.53 | 0.53 | — | 89.0 | 89.0 | < 0.005 | < 0.005 | 0.16 | 90.2 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.08 | 0.00 | 0.00 | 0.95 | 0.95 | 0.00 | 0.10 | 0.10 | — | 14.7 | 14.7 | < 0.005 | < 0.005 | 0.03 | 14.9 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

# 4. Operations Emissions Details

## 4.10. Soil Carbon Accumulation By Vegetation Type

### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Vegetation | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

### 4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

## 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Species | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

### 4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Vegetation | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

### 4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

### 4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Species | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sequest | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

# 5. Activity Data

## 5.1. Construction Schedule

| Phase Name | Phase Type | Start Date | End Date | Days Per Week | Work Days per Phase | Phase Description |
|---|---|---|---|---|---|---|
| Site Preparation | Site Preparation | 4/1/2025 | 5/23/2025 | 5.00 | 39.0 | — |
| Grading | Grading | 5/24/2025 | 10/14/2025 | 5.00 | 102 | — |
| Building Construction | Building Construction | 10/15/2025 | 9/10/2029 | 5.00 | 1,019 | — |
| Paving | Paving | 9/11/2029 | 12/19/2029 | 5.00 | 72.0 | — |
| Architectural Coating | Architectural Coating | 12/20/2029 | 3/29/2030 | 5.00 | 72.0 | — |
| Linear, Grubbing & Land Clearing | Linear, Grubbing & Land Clearing | 4/1/2025 | 5/19/2025 | 5.00 | 35.0 | — |

| | | | | | | |
|---|---|---|---|---|---|---|
| Linear, Grading & Excavation | Linear, Grading & Excavation | 5/20/2025 | 7/7/2025 | 5.00 | 35.0 | — |
| Linear, Drainage, Utilities, & Sub-Grade | Linear, Drainage, Utilities, & Sub-Grade | 7/8/2025 | 8/25/2025 | 5.00 | 35.0 | — |
| Linear, Paving | Linear, Paving | 8/26/2025 | 10/13/2025 | 5.00 | 35.0 | — |

## 5.2. Off-Road Equipment

### 5.2.1. Unmitigated

| Phase Name | Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|---|
| Site Preparation | Rubber Tired Dozers | Diesel | Average | 3.00 | 8.00 | 367 | 0.40 |
| Site Preparation | Tractors/Loaders/Backhoes | Diesel | Average | 4.00 | 8.00 | 84.0 | 0.37 |
| Grading | Graders | Diesel | Average | 1.00 | 8.00 | 148 | 0.41 |
| Grading | Excavators | Diesel | Average | 2.00 | 8.00 | 36.0 | 0.38 |
| Grading | Tractors/Loaders/Backhoes | Diesel | Average | 2.00 | 8.00 | 84.0 | 0.37 |
| Grading | Scrapers | Diesel | Average | 2.00 | 8.00 | 423 | 0.48 |
| Grading | Rubber Tired Dozers | Diesel | Average | 1.00 | 8.00 | 367 | 0.40 |
| Building Construction | Forklifts | Diesel | Average | 3.00 | 8.00 | 82.0 | 0.20 |
| Building Construction | Generator Sets | Diesel | Average | 1.00 | 8.00 | 14.0 | 0.74 |
| Building Construction | Cranes | Diesel | Average | 1.00 | 7.00 | 367 | 0.29 |
| Building Construction | Welders | Diesel | Average | 1.00 | 8.00 | 46.0 | 0.45 |
| Building Construction | Tractors/Loaders/Backhoes | Diesel | Average | 3.00 | 7.00 | 84.0 | 0.37 |
| Paving | Pavers | Diesel | Average | 2.00 | 8.00 | 81.0 | 0.42 |
| Paving | Paving Equipment | Diesel | Average | 2.00 | 8.00 | 89.0 | 0.36 |
| Paving | Rollers | Diesel | Average | 2.00 | 8.00 | 36.0 | 0.38 |
| Architectural Coating | Air Compressors | Diesel | Average | 1.00 | 6.00 | 37.0 | 0.48 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Linear, Grubbing & Land Clearing | Signal Boards | Electric | Average | 22.0 | 8.00 | 6.00 | 0.82 |
| Linear, Grubbing & Land Clearing | Crawler Tractors | Diesel | Average | 2.00 | 8.00 | 87.0 | 0.43 |
| Linear, Grubbing & Land Clearing | Excavators | Diesel | Average | 2.00 | 8.00 | 36.0 | 0.38 |
| Linear, Grading & Excavation | Excavators | Diesel | Average | 6.00 | 8.00 | 36.0 | 0.38 |
| Linear, Grading & Excavation | Crawler Tractors | Diesel | Average | 2.00 | 8.00 | 87.0 | 0.43 |
| Linear, Grading & Excavation | Graders | Diesel | Average | 2.00 | 8.00 | 148 | 0.41 |
| Linear, Grading & Excavation | Rollers | Diesel | Average | 4.00 | 8.00 | 36.0 | 0.38 |
| Linear, Grading & Excavation | Signal Boards | Electric | Average | 22.0 | 8.00 | 6.00 | 0.82 |
| Linear, Grading & Excavation | Tractors/Loaders/Backhoes | Diesel | Average | 4.00 | 8.00 | 84.0 | 0.37 |
| Linear, Grading & Excavation | Rubber Tired Loaders | Diesel | Average | 2.00 | 8.00 | 150 | 0.36 |
| Linear, Grading & Excavation | Scrapers | Diesel | Average | 4.00 | 8.00 | 423 | 0.48 |
| Linear, Drainage, Utilities, & Sub-Grade | Scrapers | Diesel | Average | 4.00 | 8.00 | 423 | 0.48 |
| Linear, Drainage, Utilities, & Sub-Grade | Rough Terrain Forklifts | Diesel | Average | 2.00 | 8.00 | 96.0 | 0.40 |
| Linear, Drainage, Utilities, & Sub-Grade | Signal Boards | Electric | Average | 22.0 | 8.00 | 6.00 | 0.82 |
| Linear, Drainage, Utilities, & Sub-Grade | Tractors/Loaders/Backhoes | Diesel | Average | 4.00 | 8.00 | 84.0 | 0.37 |
| Linear, Drainage, Utilities, & Sub-Grade | Graders | Diesel | Average | 2.00 | 8.00 | 148 | 0.41 |
| Linear, Drainage, Utilities, & Sub-Grade | Plate Compactors | Diesel | Average | 2.00 | 8.00 | 8.00 | 0.43 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Linear, Drainage, Utilities, & Sub-Grade | Pumps | Diesel | Average | 2.00 | 8.00 | 11.0 | 0.74 |
| Linear, Drainage, Utilities, & Sub-Grade | Air Compressors | Diesel | Average | 2.00 | 8.00 | 37.0 | 0.48 |
| Linear, Drainage, Utilities, & Sub-Grade | Generator Sets | Diesel | Average | 2.00 | 8.00 | 14.0 | 0.74 |
| Linear, Paving | Rollers | Diesel | Average | 6.00 | 8.00 | 36.0 | 0.38 |
| Linear, Paving | Paving Equipment | Diesel | Average | 2.00 | 8.00 | 89.0 | 0.36 |
| Linear, Paving | Pavers | Diesel | Average | 2.00 | 8.00 | 81.0 | 0.42 |
| Linear, Paving | Tractors/Loaders/Backhoes | Diesel | Average | 4.00 | 8.00 | 84.0 | 0.37 |
| Linear, Paving | Signal Boards | Electric | Average | 22.0 | 8.00 | 6.00 | 0.82 |

### 5.2.2. Mitigated

| Phase Name | Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|---|
| Site Preparation | Rubber Tired Dozers | Diesel | Tier 4 Final | 3.00 | 8.00 | 367 | 0.40 |
| Site Preparation | Tractors/Loaders/Backhoes | Diesel | Tier 4 Final | 4.00 | 8.00 | 84.0 | 0.37 |
| Grading | Graders | Diesel | Tier 4 Final | 1.00 | 8.00 | 148 | 0.41 |
| Grading | Excavators | Diesel | Tier 4 Final | 2.00 | 8.00 | 36.0 | 0.38 |
| Grading | Tractors/Loaders/Backhoes | Diesel | Tier 4 Final | 2.00 | 8.00 | 84.0 | 0.37 |
| Grading | Scrapers | Diesel | Tier 4 Final | 2.00 | 8.00 | 423 | 0.48 |
| Grading | Rubber Tired Dozers | Diesel | Tier 4 Final | 1.00 | 8.00 | 367 | 0.40 |
| Building Construction | Forklifts | Diesel | Tier 4 Final | 3.00 | 8.00 | 82.0 | 0.20 |
| Building Construction | Generator Sets | Diesel | Average | 1.00 | 8.00 | 14.0 | 0.74 |
| Building Construction | Cranes | Diesel | Tier 4 Final | 1.00 | 7.00 | 367 | 0.29 |
| Building Construction | Welders | Diesel | Tier 4 Final | 1.00 | 8.00 | 46.0 | 0.45 |
| Building Construction | Tractors/Loaders/Backhoes | Diesel | Tier 4 Final | 3.00 | 7.00 | 84.0 | 0.37 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Paving | Pavers | Diesel | Tier 4 Final | 2.00 | 8.00 | 81.0 | 0.42 |
| Paving | Paving Equipment | Diesel | Tier 4 Final | 2.00 | 8.00 | 89.0 | 0.36 |
| Paving | Rollers | Diesel | Tier 4 Final | 2.00 | 8.00 | 36.0 | 0.38 |
| Architectural Coating | Air Compressors | Diesel | Tier 4 Final | 1.00 | 6.00 | 37.0 | 0.48 |
| Linear, Grubbing & Land Clearing | Signal Boards | Electric | Average | 22.0 | 8.00 | 6.00 | 0.82 |
| Linear, Grubbing & Land Clearing | Crawler Tractors | Diesel | Tier 4 Final | 2.00 | 8.00 | 87.0 | 0.43 |
| Linear, Grubbing & Land Clearing | Excavators | Diesel | Tier 4 Final | 2.00 | 8.00 | 36.0 | 0.38 |
| Linear, Grading & Excavation | Excavators | Diesel | Tier 4 Final | 6.00 | 8.00 | 36.0 | 0.38 |
| Linear, Grading & Excavation | Crawler Tractors | Diesel | Tier 4 Final | 2.00 | 8.00 | 87.0 | 0.43 |
| Linear, Grading & Excavation | Graders | Diesel | Tier 4 Final | 2.00 | 8.00 | 148 | 0.41 |
| Linear, Grading & Excavation | Rollers | Diesel | Tier 4 Final | 4.00 | 8.00 | 36.0 | 0.38 |
| Linear, Grading & Excavation | Signal Boards | Electric | Average | 22.0 | 8.00 | 6.00 | 0.82 |
| Linear, Grading & Excavation | Tractors/Loaders/Backhoes | Diesel | Tier 4 Final | 4.00 | 8.00 | 84.0 | 0.37 |
| Linear, Grading & Excavation | Rubber Tired Loaders | Diesel | Tier 4 Final | 2.00 | 8.00 | 150 | 0.36 |
| Linear, Grading & Excavation | Scrapers | Diesel | Tier 4 Final | 4.00 | 8.00 | 423 | 0.48 |
| Linear, Drainage, Utilities, & Sub-Grade | Scrapers | Diesel | Tier 4 Final | 4.00 | 8.00 | 423 | 0.48 |
| Linear, Drainage, Utilities, & Sub-Grade | Rough Terrain Forklifts | Diesel | Tier 4 Final | 2.00 | 8.00 | 96.0 | 0.40 |
| Linear, Drainage, Utilities, & Sub-Grade | Signal Boards | Electric | Average | 22.0 | 8.00 | 6.00 | 0.82 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Linear, Drainage, Utilities, & Sub-Grade | Tractors/Loaders/Backhoes | Diesel | Tier 4 Final | 4.00 | 8.00 | 84.0 | 0.37 |
| Linear, Drainage, Utilities, & Sub-Grade | Graders | Diesel | Tier 4 Final | 2.00 | 8.00 | 148 | 0.41 |
| Linear, Drainage, Utilities, & Sub-Grade | Plate Compactors | Diesel | Average | 2.00 | 8.00 | 8.00 | 0.43 |
| Linear, Drainage, Utilities, & Sub-Grade | Pumps | Diesel | Average | 2.00 | 8.00 | 11.0 | 0.74 |
| Linear, Drainage, Utilities, & Sub-Grade | Air Compressors | Diesel | Tier 4 Final | 2.00 | 8.00 | 37.0 | 0.48 |
| Linear, Drainage, Utilities, & Sub-Grade | Generator Sets | Diesel | Average | 2.00 | 8.00 | 14.0 | 0.74 |
| Linear, Paving | Rollers | Diesel | Tier 4 Final | 6.00 | 8.00 | 36.0 | 0.38 |
| Linear, Paving | Paving Equipment | Diesel | Tier 4 Final | 2.00 | 8.00 | 89.0 | 0.36 |
| Linear, Paving | Pavers | Diesel | Tier 4 Final | 2.00 | 8.00 | 81.0 | 0.42 |
| Linear, Paving | Tractors/Loaders/Backhoes | Diesel | Tier 4 Final | 4.00 | 8.00 | 84.0 | 0.37 |
| Linear, Paving | Signal Boards | Electric | Average | 22.0 | 8.00 | 6.00 | 0.82 |

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Site Preparation | — | — | — | — |
| Site Preparation | Worker | 17.5 | 14.3 | LDA,LDT1,LDT2 |
| Site Preparation | Vendor | — | 8.80 | HHDT,MHDT |
| Site Preparation | Hauling | 0.00 | 20.0 | HHDT |
| Site Preparation | Onsite truck | — | — | HHDT |
| Grading | — | — | — | — |
| Grading | Worker | 20.0 | 14.3 | LDA,LDT1,LDT2 |

| | | | | |
|---|---|---|---|---|
| Grading | Vendor | — | 8.80 | HHDT,MHDT |
| Grading | Hauling | 0.00 | 20.0 | HHDT |
| Grading | Onsite truck | — | — | HHDT |
| Building Construction | — | — | — | — |
| Building Construction | Worker | 197 | 14.3 | LDA,LDT1,LDT2 |
| Building Construction | Vendor | 64.1 | 8.80 | HHDT,MHDT |
| Building Construction | Hauling | 0.00 | 20.0 | HHDT |
| Building Construction | Onsite truck | — | — | HHDT |
| Paving | — | — | — | — |
| Paving | Worker | 15.0 | 14.3 | LDA,LDT1,LDT2 |
| Paving | Vendor | — | 8.80 | HHDT,MHDT |
| Paving | Hauling | 0.00 | 20.0 | HHDT |
| Paving | Onsite truck | — | — | HHDT |
| Architectural Coating | — | — | — | — |
| Architectural Coating | Worker | 39.4 | 14.3 | LDA,LDT1,LDT2 |
| Architectural Coating | Vendor | — | 8.80 | HHDT,MHDT |
| Architectural Coating | Hauling | 0.00 | 20.0 | HHDT |
| Architectural Coating | Onsite truck | — | — | HHDT |
| Linear, Grubbing & Land Clearing | — | — | — | — |
| Linear, Grubbing & Land Clearing | Worker | 65.0 | 14.3 | LDA,LDT1,LDT2 |
| Linear, Grubbing & Land Clearing | Vendor | 0.00 | 8.80 | HHDT,MHDT |
| Linear, Grubbing & Land Clearing | Hauling | 0.00 | 20.0 | HHDT |
| Linear, Grubbing & Land Clearing | Onsite truck | — | — | HHDT |
| Linear, Grading & Excavation | — | — | — | — |
| Linear, Grading & Excavation | Worker | 115 | 14.3 | LDA,LDT1,LDT2 |
| Linear, Grading & Excavation | Vendor | 2.00 | 8.80 | HHDT,MHDT |
| Linear, Grading & Excavation | Hauling | 0.00 | 20.0 | HHDT |

| | | | | |
|---|---|---|---|---|
| Linear, Grading & Excavation | Onsite truck | — | — | HHDT |
| Linear, Drainage, Utilities, & Sub-Grade | — | — | — | — |
| Linear, Drainage, Utilities, & Sub-Grade | Worker | 105 | 14.3 | LDA,LDT1,LDT2 |
| Linear, Drainage, Utilities, & Sub-Grade | Vendor | 0.00 | 8.80 | HHDT,MHDT |
| Linear, Drainage, Utilities, & Sub-Grade | Hauling | 0.00 | 20.0 | HHDT |
| Linear, Drainage, Utilities, & Sub-Grade | Onsite truck | — | — | HHDT |
| Linear, Paving | — | — | — | — |
| Linear, Paving | Worker | 90.0 | 14.3 | LDA,LDT1,LDT2 |
| Linear, Paving | Vendor | 0.00 | 8.80 | HHDT,MHDT |
| Linear, Paving | Hauling | 0.00 | 20.0 | HHDT |
| Linear, Paving | Onsite truck | — | — | HHDT |

### 5.3.2. Mitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Site Preparation | — | — | — | — |
| Site Preparation | Worker | 17.5 | 14.3 | LDA,LDT1,LDT2 |
| Site Preparation | Vendor | — | 8.80 | HHDT,MHDT |
| Site Preparation | Hauling | 0.00 | 20.0 | HHDT |
| Site Preparation | Onsite truck | — | — | HHDT |
| Grading | — | — | — | — |
| Grading | Worker | 20.0 | 14.3 | LDA,LDT1,LDT2 |
| Grading | Vendor | — | 8.80 | HHDT,MHDT |
| Grading | Hauling | 0.00 | 20.0 | HHDT |
| Grading | Onsite truck | — | — | HHDT |
| Building Construction | — | — | — | — |
| Building Construction | Worker | 197 | 14.3 | LDA,LDT1,LDT2 |
| Building Construction | Vendor | 64.1 | 8.80 | HHDT,MHDT |

| | | | | |
|---|---|---|---|---|
| Building Construction | Hauling | 0.00 | 20.0 | HHDT |
| Building Construction | Onsite truck | — | — | HHDT |
| Paving | — | — | — | — |
| Paving | Worker | 15.0 | 14.3 | LDA,LDT1,LDT2 |
| Paving | Vendor | — | 8.80 | HHDT,MHDT |
| Paving | Hauling | 0.00 | 20.0 | HHDT |
| Paving | Onsite truck | — | — | HHDT |
| Architectural Coating | — | — | — | — |
| Architectural Coating | Worker | 39.4 | 14.3 | LDA,LDT1,LDT2 |
| Architectural Coating | Vendor | — | 8.80 | HHDT,MHDT |
| Architectural Coating | Hauling | 0.00 | 20.0 | HHDT |
| Architectural Coating | Onsite truck | — | — | HHDT |
| Linear, Grubbing & Land Clearing | — | — | — | — |
| Linear, Grubbing & Land Clearing | Worker | 65.0 | 14.3 | LDA,LDT1,LDT2 |
| Linear, Grubbing & Land Clearing | Vendor | 0.00 | 8.80 | HHDT,MHDT |
| Linear, Grubbing & Land Clearing | Hauling | 0.00 | 20.0 | HHDT |
| Linear, Grubbing & Land Clearing | Onsite truck | — | — | HHDT |
| Linear, Grading & Excavation | — | — | — | — |
| Linear, Grading & Excavation | Worker | 115 | 14.3 | LDA,LDT1,LDT2 |
| Linear, Grading & Excavation | Vendor | 2.00 | 8.80 | HHDT,MHDT |
| Linear, Grading & Excavation | Hauling | 0.00 | 20.0 | HHDT |
| Linear, Grading & Excavation | Onsite truck | — | — | HHDT |
| Linear, Drainage, Utilities, & Sub-Grade | — | — | — | — |
| Linear, Drainage, Utilities, & Sub-Grade | Worker | 105 | 14.3 | LDA,LDT1,LDT2 |
| Linear, Drainage, Utilities, & Sub-Grade | Vendor | 0.00 | 8.80 | HHDT,MHDT |
| Linear, Drainage, Utilities, & Sub-Grade | Hauling | 0.00 | 20.0 | HHDT |
| Linear, Drainage, Utilities, & Sub-Grade | Onsite truck | — | — | HHDT |

| | | | | |
|---|---|---|---|---|
| Linear, Paving | — | — | — | — |
| Linear, Paving | Worker | 90.0 | 14.3 | LDA,LDT1,LDT2 |
| Linear, Paving | Vendor | 0.00 | 8.80 | HHDT,MHDT |
| Linear, Paving | Hauling | 0.00 | 20.0 | HHDT |
| Linear, Paving | Onsite truck | — | — | HHDT |

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

| Phase Name | Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|---|
| Architectural Coating | 1,496,576 | 498,859 | 215,622 | 71,874 | — |

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

| Phase Name | Material Imported (cy) | Material Exported (cy) | Acres Graded (acres) | Material Demolished (sq. ft.) | Acres Paved (acres) |
|---|---|---|---|---|---|
| Site Preparation | — | — | 58.5 | 0.00 | — |
| Grading | — | — | 306 | 0.00 | — |
| Paving | 0.00 | 0.00 | 0.00 | 0.00 | 103 |
| Linear, Grubbing & Land Clearing | — | — | 98.4 | 0.00 | — |
| Linear, Grading & Excavation | — | — | 98.4 | 0.00 | — |
| Linear, Drainage, Utilities, & Sub-Grade | — | — | 98.4 | 0.00 | — |

### 5.6.2. Construction Earthmoving Control Strategies

| Control Strategies Applied | Frequency (per day) | PM10 Reduction | PM2.5 Reduction |
|---|---|---|---|
| Water Exposed Area | 2 | 61% | 61% |

## 5.7. Construction Paving

| Land Use | Area Paved (acres) | % Asphalt |
|---|---|---|
| Single Family Housing | 0.20 | 0% |
| Single Family Housing | 3.98 | 0% |
| Health Club | 0.00 | 0% |
| City Park | 0.00 | 0% |
| City Park | 0.00 | 0% |
| City Park | 0.00 | 0% |
| Road Construction | 31.5 | 100% |
| Road Construction | 67.0 | 100% |

## 5.8. Construction Electricity Consumption and Emissions Factors

### kWh per Year and Emission Factor (lb/MWh)

| Year | kWh per Year | CO2 | CH4 | N2O |
|---|---|---|---|---|
| 2025 | 2,583 | 204 | 0.03 | < 0.005 |
| 2026 | 0.00 | 204 | 0.03 | < 0.005 |
| 2027 | 0.00 | 204 | 0.03 | < 0.005 |
| 2028 | 0.00 | 204 | 0.03 | < 0.005 |
| 2029 | 0.00 | 204 | 0.03 | < 0.005 |
| 2030 | 0.00 | 204 | 0.03 | < 0.005 |

# 5.18. Vegetation

## 5.18.1. Land Use Change

### 5.18.1.1. Unmitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
|---|---|---|---|

### 5.18.1.2. Mitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
|---|---|---|---|

## 5.18.1. Biomass Cover Type

### 5.18.1.1. Unmitigated

| Biomass Cover Type | Initial Acres | Final Acres |
|---|---|---|

### 5.18.1.2. Mitigated

| Biomass Cover Type | Initial Acres | Final Acres |
|---|---|---|

## 5.18.2. Sequestration

### 5.18.2.1. Unmitigated

| Tree Type | Number | Electricity Saved (kWh/year) | Natural Gas Saved (btu/year) |
|---|---|---|---|

### 5.18.2.2. Mitigated

| Tree Type | Number | Electricity Saved (kWh/year) | Natural Gas Saved (btu/year) |
|---|---|---|---|

# 6. Climate Risk Detailed Report

## 6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

| Climate Hazard | Result for Project Location | Unit |
|---|---|---|
| Temperature and Extreme Heat | 31.2 | annual days of extreme heat |
| Extreme Precipitation | 9.95 | annual days with precipitation above 20 mm |
| Sea Level Rise | — | meters of inundation depth |
| Wildfire | 16.6 | annual hectares burned |

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

## 6.2. Initial Climate Risk Scores

| Climate Hazard | Exposure Score | Sensitivity Score | Adaptive Capacity Score | Vulnerability Score |
|---|---|---|---|---|
| Temperature and Extreme Heat | N/A | N/A | N/A | N/A |
| Extreme Precipitation | 2 | 0 | 0 | N/A |
| Sea Level Rise | N/A | N/A | N/A | N/A |
| Wildfire | 1 | 0 | 0 | N/A |
| Flooding | N/A | N/A | N/A | N/A |
| Drought | N/A | N/A | N/A | N/A |
| Snowpack Reduction | 0 | 0 | 0 | N/A |

| | | | | |
|---|---|---|---|---|
| Air Quality Degradation | N/A | N/A | N/A | N/A |

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

## 6.3. Adjusted Climate Risk Scores

| Climate Hazard | Exposure Score | Sensitivity Score | Adaptive Capacity Score | Vulnerability Score |
|---|---|---|---|---|
| Temperature and Extreme Heat | N/A | N/A | N/A | N/A |
| Extreme Precipitation | 2 | 1 | 1 | 3 |
| Sea Level Rise | N/A | N/A | N/A | N/A |
| Wildfire | 1 | 1 | 1 | 2 |
| Flooding | N/A | N/A | N/A | N/A |
| Drought | N/A | N/A | N/A | N/A |
| Snowpack Reduction | 1 | 1 | 1 | 2 |
| Air Quality Degradation | N/A | N/A | N/A | N/A |

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

## 6.4. Climate Risk Reduction Measures

# 7. Health and Equity Details

## 7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

| Indicator | Result for Project Census Tract |
|---|---|
| Exposure Indicators | — |

| | |
|---|---|
| AQ-Ozone | 75.1 |
| AQ-PM | 14.1 |
| AQ-DPM | 12.2 |
| Drinking Water | 15.7 |
| Lead Risk Housing | 1.95 |
| Pesticides | 27.4 |
| Toxic Releases | 13.2 |
| Traffic | 15.6 |
| Effect Indicators | — |
| CleanUp Sites | 50.3 |
| Groundwater | 0.00 |
| Haz Waste Facilities/Generators | 19.2 |
| Impaired Water Bodies | 12.5 |
| Solid Waste | 2.52 |
| Sensitive Population | — |
| Asthma | 7.33 |
| Cardio-vascular | 25.7 |
| Low Birth Weights | 0.23 |
| Socioeconomic Factor Indicators | — |
| Education | 2.30 |
| Housing | 2.43 |
| Linguistic | 0.92 |
| Poverty | 3.54 |
| Unemployment | 26.9 |

## 7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

| Indicator | Result for Project Census Tract |
|---|---|
| Economic | — |
| Above Poverty | 99.08892596 |
| Employed | 79.81521879 |
| Median HI | 93.40433723 |
| Education | — |
| Bachelor's or higher | 84.10111639 |
| High school enrollment | 100 |
| Preschool enrollment | 21.10868728 |
| Transportation | — |
| Auto Access | 90.86359553 |
| Active commuting | 57.71846529 |
| Social | — |
| 2-parent households | 98.53714872 |
| Voting | 94.81586039 |
| Neighborhood | — |
| Alcohol availability | 88.14320544 |
| Park access | 39.61247273 |
| Retail density | 15.95021173 |
| Supermarket access | 26.3826511 |
| Tree canopy | 94.66187604 |
| Housing | — |
| Homeownership | 99.28140639 |
| Housing habitability | 99.97433594 |
| Low-inc homeowner severe housing cost burden | 94.52072373 |
| Low-inc renter severe housing cost burden | 99.08892596 |
| Uncrowded housing | 96.93314513 |

| | |
|---|---|
| Health Outcomes | — |
| Insured adults | 97.11279353 |
| Arthritis | 0.0 |
| Asthma ER Admissions | 91.3 |
| High Blood Pressure | 0.0 |
| Cancer (excluding skin) | 0.0 |
| Asthma | 0.0 |
| Coronary Heart Disease | 0.0 |
| Chronic Obstructive Pulmonary Disease | 0.0 |
| Diagnosed Diabetes | 0.0 |
| Life Expectancy at Birth | 75.2 |
| Cognitively Disabled | 98.4 |
| Physically  Disabled | 98.6 |
| Heart Attack ER Admissions | 77.2 |
| Mental Health Not Good | 0.0 |
| Chronic Kidney Disease | 0.0 |
| Obesity | 0.0 |
| Pedestrian Injuries | 19.6 |
| Physical Health Not Good | 0.0 |
| Stroke | 0.0 |
| Health Risk Behaviors | — |
| Binge Drinking | 0.0 |
| Current Smoker | 0.0 |
| No Leisure Time for Physical Activity | 0.0 |
| Climate Change Exposures | — |
| Wildfire Risk | 0.0 |
| SLR Inundation Area | 0.0 |

| | |
|---|---|
| Children | 55.0 |
| Elderly | 47.3 |
| English Speaking | 72.5 |
| Foreign-born | 6.2 |
| Outdoor Workers | 65.6 |
| Climate Change Adaptive Capacity | — |
| Impervious Surface Cover | 90.5 |
| Traffic Density | 17.6 |
| Traffic Access | 0.0 |
| Other Indices | — |
| Hardship | 7.2 |
| Other Decision Support | — |
| 2016 Voting | 97.6 |

## 7.3. Overall Health & Equity Scores

| Metric | Result for Project Census Tract |
|---|---|
| CalEnviroScreen 4.0 Score for Project Location (a) | 0.00 |
| Healthy Places Index Score for Project Location (b) | 95.0 |
| Project Located in a Designated Disadvantaged Community (Senate Bill 535) | No |
| Project Located in a Low-Income Community (Assembly Bill 1550) | No |
| Project Located in a Community Air Protection Program Community (Assembly Bill 617) | No |

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

## 7.4. Health & Equity Measures

No Health & Equity Measures selected.

## 7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

## 7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

# 8. User Changes to Default Data

| Screen | Justification |
|---|---|
| Land Use | PD |
| Construction: Construction Phases | 5 year buildout starting in April 2025 |
| Construction: Architectural Coatings | El dorado VOC limit: 100 g/L for flat, 50 for nonflat |

## Summary Tables

**Maximum Daily Construction Emissions (unmitigated)**

| Year | ROG (lb/day) | $NO_X$ (lb/day) | $PM_{10}$ Exhaust (lb/day) | $PM_{10}$ Dust (lb/day) | $PM_{2.5}$ Exhaust (lb/day) | $PM_{2.5}$ Dust (lb/day) |
|---|---|---|---|---|---|---|
| | Maximum Daily Emissions | | | | | |
| 2025 | 10 | 87 | 4 | 147 | 3 | 15 |
| 2026 | 2 | 14 | 0 | 147 | 0 | 15 |
| 2027 | 11 | 13 | 0 | 147 | 0 | 15 |
| 2028 | 11 | 12 | 0 | 147 | 0 | 15 |
| 2029 | 11 | 12 | 0 | 147 | 0 | 15 |
| 2030 | 11 | 1 | 0 | 24 | 0 | 2 |

**Maximum Daily Construction Emissions (Mitigated)**

| Year | ROG (lb/day) | $NO_X$ (lb/day) | $PM_{10}$ Exhaust (lb/day) | $PM_{10}$ Dust (lb/day) | $PM_{2.5}$ Exhaust (lb/day) | $PM_{2.5}$ Dust (lb/day) |
|---|---|---|---|---|---|---|
| | Maximum Daily Emissions | | | | | |
| 2025 | 3 | 17 | 0 | 147 | 0 | 15 |
| 2026 | 1 | 7 | 0 | 147 | 0 | 15 |
| 2027 | 11 | 6 | 0 | 147 | 0 | 15 |
| 2028 | 11 | 6 | 0 | 147 | 0 | 15 |
| 2029 | 11 | 6 | 0 | 147 | 0 | 15 |
| 2030 | 11 | 1 | < 0.005 | 24 | < 0.005 | 2 |

**Project Max Operations (unmit)**

| Sector | ROG (lb/day) | $NO_X$ (lb/day) | PM10 Exhaust (lb/day) | PM10 Dust (lb/day) | PM2.5 Exhaust (lb/day) | PM2.5 Dust (lb/day) |
|---|---|---|---|---|---|---|
| Mobile | 12 | 8 | 0 | 145 | 0 | 16 |
| Area | 25 | 4 | 0 | 0 | 0 | 0 |
| Energy | 0 | 4 | 0 | 0 | 0 | 0 |
| **Total** | 37 | 16 | 1 | 145 | 1 | 16 |

**Project Max Operations (no fire places)**

| Sector | ROG (lb/day) | $NO_X$ (lb/day) | PM10 Exhaust (lb/day) | PM10 Dust (lb/day) | PM2.5 Exhaust (lb/day) | PM2.5 Dust (lb/day) |
|---|---|---|---|---|---|---|
| Mobile | 12 | 8 | 0 | 145 | 0 | 16 |
| Area | 28 | 1 | 5 | 0 | 5 | 0 |
| Energy | 0 | 4 | 0 | 0 | 0 | 0 |
| **Total** | 41 | 13 | 5 | 145 | 5 | 16 |

**Project Max Operations (no fire places or NG)**

| Sector | ROG (lb/day) | $NO_X$ (lb/day) | PM10 Exhaust (lb/day) | PM10 Dust (lb/day) | PM2.5 Exhaust (lb/day) | PM2.5 Dust (lb/day) |
|---|---|---|---|---|---|---|
| Mobile | 12 | 8 | 0 | 145 | 0 | 16 |
| Area | 28 | 1 | 5 | 0 | 5 | 0 |
| Energy | 0 | 2 | 0 | 0 | 0 | 0 |
| **Total** | 40 | 11 | 5 | 145 | 5 | 16 |

CO2 Emissions by Year

| Year | CO2 |
|---|---|
| 2025 | 1095 |
| 2026 | 769 |
| 2027 | 761 |
| **2028** | 753 |
| **2029** | **569** |
| 2030 | 15 |
| 2031+ (operations) | 4189 |
| 2031+ (No Fire) | 4067 |
| 2031+ (No fire or NG | 3482 |

Construction Total: 3962

## Project Charactistics and Land Use Types

**Operational Year**

Construction Start

| Land Uses | | | | | | |
|---|---|---|---|---|---|---|
| **Land Use Subtype** | **Size** | **Unit** | **Lot Acreage** | **Building Ar** | **landscape** | **Description** |
| Single Family Homes | 18 | Units | 5 | 35100 | 210831 | Low Density Residential |
| Single Family Homes | 361 | Units | 171.35 | 703950 | 4228341 | High Density Residential |
| Health Club | 143.748 | 1000 sf | 3.3 | 143748 | 0 | Clubhouse (3.3 acres) |
| City Park | 4 | Acres | 4 | 0 | 0 | Public Facilities (lot A) |
| City Park | 57.58 | acres | 57.58 | 0 | 0 | Open Space |
| City Park | 8 | acres | 8 | 0 | 0 | Landscape Lots L1-L13, open space C-K |
| Road Construction | 3 | miles | 31.47 | 0 | 0 | Road Construction |
| Total | | | 280.7 | | | |

Total Project: 379 residential lots, clubhouse, park site lot, 6 landscaping lots, 9 open space lots

Total Project: 280 Acres

1 acre = 43560 sf

## Construction Schedule

### PHASE 1

| Phase | CalEEMod Default Workdays | % of total | New Workdays | Start | end |
|---|---|---|---|---|---|
| ~~Demolition~~ | 300 | 0.0% | 0 | x | x |
| Site Prep | 180 | 3.0% | 39.44584383 | 4/1/2025 | 5/23/2025 |
| Grading | 465 | 7.8% | 101.9017632 | 5/24/2025 | 10/14/2025 |
| BC | 4650 | 78.1% | 1019.017632 | 10/15/2025 | 9/10/2029 |
| Paving | 330 | 5.5% | 72.31738035 | 9/11/2029 | 12/19/2029 |
| AC | 330 | 5.5% | 72.31738035 | 12/20/2029 | 3/29/2030 |
| **TOTAL** | 5955 | 100.0% | 1305 | | |

### Road Construction

| Phase | New Workdays | Start | end |
|---|---|---|---|
| Linear, Grubbing & Land Clearing | 35 | 4/1/2025 | 5/19/2025 |
| Linear, Grading & Excavation | 35 | 5/20/2025 | 7/7/2025 |
| Linear, Drainage, Utilities, & Sub-Grade | 35 | 7/8/2025 | 8/25/2025 |
| Linear, Paving | 35 | 8/26/2025 | 10/13/2025 |
| **Total** | 140 | | |

## Other Constuction Inputs

Default Construction Equipment used
*water twice per day for 61% reduction
Default VMT used
Default architectural coating limits
Default paving used
Default PG&E Electricity Intensity Factors used
Project Construction Starts April 2025 and be completed in 5 years (April 2030)
140 days for road construction (Site prep + grading)

## Applicable Dust Measures (El Dorado County)

| | **Rule 223 Fugitive Dust** |
|---|---|
| Concentration Limit: | A person shall not cause or allow PM10 levels to exceed 50 micrograms per cubic meter, 24 hour average, when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA approved equivalent methods for PM10 monitoring. Sampling, if deemed necessary and required by the Air Pollution Control Officer, shall be conducted in accordance with the procedures specified in Section 223.5.A. |
| Best Management Practices (construction): clearing and grubbing | Apply water in sufficient quantity to prevent generation of dust plumes |
| Best Management Practices (construction): crushing | Pre-water material prior to loading into crusher. Apply water to crushed material to prevent dust plumes. |
| Best Management Practices (construction): cut and fill | For large sites, pre-water with sprinklers or water trucks and allow time for penetration. Use water as necessary to keep dust down. |
| Best Management Practices (construction): demolition | Apply water in sufficient quantities to prevent the generation of visible dust plumes. |
| Best Management Practices (construction): disturbed soil | Limit vehicular traffic and disturbances on soils where possible. Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes. |
| Best Management Practices (construction): earth-moving activities | Grade each project phase separately, timed to coincide with construction phase. Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes. |
| Best Management Practices (construction): importing/exporting bulk materials | Provide water while loading and unloading to reduce visible dust plumes. |
| Best Management Practices (construction): landscaping | Apply water to materials to stabilize. |
| Best Management Practices (construction): screening | Dedicate water truck or high capacity hose to screening operation. Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point. |
| Best Management Practices (construction): Staging Areas | Limit vehicle speeds to prevent visible dust in excess of standards per 223-1.4.A |
| Best Management Practices (construction): trenching | Pre-watering of soils prior to trenching is an effective preventive measure |
| Best Management Practices (construction): unpaved roads/parking lots | Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements. |
| Conclusion: | Water exposed area twice per day |
| Source: | https://www.edcgov.us/Government/AirQualityManagement/documents/Rule_223_Fugitive_Dust_General_Requirements.pdf |
| Source: | https://www.edcgov.us/Government/AirQualityManagement/documents/Rule%20223-1_Fugitive%20Dust-Construction.pdf |

## Mitigation Measures

Tier 4 engines
Low VOC Paint

| | Adjusted # of Days | | Off Model Adjustments |
|---|---|---|---|
| | | 816.54 | Adjusted Arch Coating Days |
| | | | based on 2/3 building days plus paving and arch coating |
| | | **129** | Unmitigated ROG lbs/day |
| | | 9288 | ROG X Arch Tech Days |
| Building Construction | 1019 | **11.37483** | **Adjusted ROG** |
| Paving | 72 | | |
| Arch Coating | 72 | | |

| Description | Length (feet) | Road width | Total SF | Acres |
|---|---|---|---|---|
| Greenview Drive Pipeline | 5280 | 38 | 200640 | 4.606060606 |
| Green Valley Road Pipeline | 5280 | 42 | 221760 | 5.090909091 |
| Loch Way wastewater pipeline | 1600 | 31 | 49600 | 1.13865932 |
| Silva Valley Parkway Wastewater pipeline | 8500 | 44 | 374000 | 8.585858586 |
| Lima Way, Aberdeen Lane and Appian Way Cable Replacement | 7392 | 37 | 273504 | 6.278787879 |
| Electrical Conduit between projects | 10560 | 35 | 369600 | 8.484848485 |
| **Total** | 38612 | | 1489104 | 34.18512397 |
| Total Miles | 7.312878788 | | | |

Note: 1 acre to SF 43560

Source: Google.com

## Off-Model Solar PV Reduction Calc

| CalEEMod land Use Type | CalEEMod Input (SF)[1] | Units[2] | CalEEMod default SF/house | Avg. PV Size per house (kw)[3] | Solar PV Generation per house (kwh/year)[4] | Total Solar Generation (all new residential) (kwh/year) | Total Solar Generation (all new residential) (mwh/year) | Total Solar Generation (all new residential) (gwh/year) | GHG Reduction from Solar (MTCO2e/yr) |
|---|---|---|---|---|---|---|---|---|---|
| Single Family Homes (379) | 739,050 | 379 | 1950 | 5 | 8000 | 3,032,000 | 3,032 | 3 | 206 |
| | | | | | | **3,032,000** | **3,032** | | **206** |

| | | |
|---|---|---|
| | CalEEmod Operational Electricity Consumption (not including solar) | **0.0** |
| | Total proejct electricity consumption | **(3,032.0)** |

Notes

1. total SF entered into CalEEMod for each phase
2. Total # units
3. Avg. PV size for PG&E obtained from: https://www.solarreviews.com/blog/guide-to-solar-with-pacific-gas-and-electric
4. Annual solar generation calculated using PVWatts calculator for Cameron Meadows

**Conversion factors:**

| | |
|---|---|
| lb/metric tons | 0.000453592 |
| kw/mw | 0.001 |

| **CO2 Intensity Factors** | lb/kwh | Source | MT/kWh | Source | GWP | Source |
|---|---|---|---|---|---|---|
| CO2 | 149 | CalEEMod, SMUD, 2035 | 0.067585208 | Calc | 1 | **IPPC AR6, 2023** |
| CH4 | 0.0129 | CalEEMod, SMUD, 2035 | 5.85134E-06 | Calc | 27 | **IPPC AR6, 2023** |
| N20 | 0.0017 | CalEEMod, SMUD, 2035 | 7.71106E-07 | Calc | 273 | **IPPC AR6, 2023** |
| | | | | | | |
| **CO2e** | | | **0.067953706** | | | |

## Construction Energy Consumption

**Gasoline (workers)**

| Year | CO2 (MT) | CO2 (km) | fuel | BTU | million BTU |
|---|---|---|---|---|---|
| 2025 | 123.88 | 123880 | **14,109** | 1696144159 | 1696.144159 |
| 2026 | 239 | 239000 | **27,221** | 3272347869 | 3272.347869 |
| 2027 | 235 | 235000 | **26,765** | 3217580540 | 3217.58054 |
| 2028 | 231 | 231000 | **26,310** | 3162813212 | 3162.813212 |
| 2029 | 163.26 | 163260 | **18,595** | 2235328506 | 2235.328506 |
| 2030 | 10.7 | 10700 | **1,219** | 146502603.3 | 146.5026033 |
| | **1,003** | **1,002,840** | **114,219** | | |

**Total**

| Year | CO2 (MT) | CO2 (km) | fuel | BTU | million BTU |
|---|---|---|---|---|---|
| 2025 | 1,094 | 1,094,330 | 109,158 | 14,754,062,400 | 14,754 |
| 2026 | 769 | 769,000 | 79,131 | 10,403,778,306 | 10,404 |
| 2027 | 760 | 760,000 | 78,186 | 10,281,733,332 | 10,282 |
| 2028 | 752 | 752,000 | 77,338 | 10,173,143,887 | 10,173 |
| 2029 | 569 | 569,280 | 58,361 | 7,698,542,442 | 7,699 |
| 2030 | 15 | 14,520 | 1,593 | 197,902,725 | 198 |
| Total | **3,959** | **3,959,130** | **403,767** | **53,509,163,090** | **53,509** |

**Diesel (offroad eq, hauling, vendors)**

| Year | CO2 (MT) | CO2 (km) | fuel | BTU | million BTU |
|---|---|---|---|---|---|
| 2025 | 970 | 970450 | **95,049** | 13057918241 | 13057.91824 |
| 2026 | 530 | 530000 | **51,910** | 7131430437 | 7131.430437 |
| 2027 | 525 | 525000 | **51,420** | 7064152791 | 7064.152791 |
| 2028 | 521 | 521000 | **51,028** | 7010330675 | 7010.330675 |
| 2029 | 406 | 406020 | **39,767** | 5463213936 | 5463.213936 |
| 2030 | 4 | 3820 | **374** | 51400121.26 | 51.40012126 |
| | **2,956** | **2,956,290** | **289,548** | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| MT to km | 1000 | | | | motor gas | distallate | |
| CO2 to Gal gasoline | 8.78 | Climate Registry 2022 | | | | | |
| gasoline gal/btu | 120,214 | EIA 2023 | | btu per barrel | 5,049,000 | 5,770,000 | EIA |
| CO2 to gas diesel | 10.21 | Climate Registry 2022 | | gallons per barrel | 42 | 42 | EIA |
| diesel gas/btu | 137,381 | EIA 2023 | | btu per gallon | 120,214 | 137,381 | conversion |

https://theclimateregistry.org/wp-content/uploads/2022/11/2022-Default-Emission-Factors-Final.pdf

EIA 2023. Table A3: Approximate Heat Content of Petroleum Consumption and Fuel Ethanol. Avaialble: https://www.eia.gov/totalenergy/data/monthly/pdf/sec12_4.pdf

## Operations

| VMT | Amount |
|---|---|
| VMT per capita (plus project scenario): | 19.61453744 |
| Project Population: | 908 |
| Additional Trips per day: | 2842 |
| Yearly Trips | 1037330 |
| Trip Length | 6.266713582 |
| **Total Daily VMT:** | **17810** |
| **Yearly VMT** | **6500650** |

Project Fully electric: No Natural Gas usage
No Fire Places (data request - Jim/Deanne)
Default Water usage
Default Refrigerants
No offroad equipment usage/boilers

MMs:
Low VOC paint

**No Fire Places**

| | | | max lb/day | | | | Max tons/year | | GHG/year |
|---|---|---|---|---|---|---|---|---|---|
| Sector | ROG | NOx | PM10E | PM10D | PM2.5E | PM2.5D | PM10 | PM2.5 | CO2e |
| Mobile | 12 | 8.18 | 0.12 | 145 | 0.12 | 16.4 | 25.8 | 2.94 | 2309 |
| Area | 28.3 | 0.92 | 4.87 | 0 | 4.7 | 0 | 0.2 | 0.19 | 48.2 |
| Energy | 0.25 | 4.38 | 0.35 | 0 | 0.35 | 0 | 0.06 | 0.06 | 1344 |
| Water | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42.9 |
| Waste | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 322 |
| Refrig. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.99 |
| Total | **40.55** | **13.48** | **5.34** | **145** | **5.17** | | **26.06** | **3.19** | **4067.09** |

**No Fire Places, No NG**

| | | | max lb/day | | | | Max tons/year | | GHG/year |
|---|---|---|---|---|---|---|---|---|---|
| Sector | ROG | NOx | PM10E | PM10D | PM2.5E | PM2.5D | PM10 | PM2.5 | CO2e |
| Mobile | 12 | 8.18 | 0.12 | 145 | 0.12 | 16.4 | 25.8 | 2.94 | 2309 |
| Area | 28.3 | 0.92 | 4.87 | 0 | 4.7 | 0 | 0.2 | 0.19 | 48.2 |
| Energy | 0.09 | 1.6 | 0.12 | 0 | 0.12 | 0 | 0.02 | 0.02 | 759 |
| Water | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42.9 |
| Waste | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 322 |
| Refrig. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.99 |
| Total | **40.39** | **10.7** | **5.11** | **145** | **4.94** | | **26.02** | **3.15** | **3482.09** |

## Operational Energy Calcs

**Unmitigated fuel consumption**

| Sector | CO2 (MT/year) | CO2 (km) | fuel | BTU | million BTU |
|---|---|---|---|---|---|
| Mobile | 13944 | 13944000 | **1588154.9** | 1.90919E+11 | 190918.9 |
| Area | 1028 | 1028000 | **117084.282** | 14075203384 | 14075.2 |
| Energy | 8120 | 8120000 | **924829.157** | 1.11178E+11 | 111177.7 |
| Water | 259 | 259000 | **29498.861** | 3546184510 | 3546.2 |
| Waste | 1944 | 1944000 | **221412.301** | 26616921575 | 26616.9 |
| Refrig. | 6 | 5980 | **681.093394** | 81877155.87 | 81.9 |
| Total | 25301 | 25300980 | 2881660.59 | 3.46417E+11 | 346416.8 |

| | | | | | |
|---|---|---|---|---|---|
| MT to km | 1000 | | | | |
| CO2 to Gal gasoline | 8.78 | Climate Registry 2022 | | motor gas | distallate |
| gasoline gal/btu | 120,214 | EIA 2023 | btu per barrel | 5,049,000 | 5,770,000 |
| CO2 to gas diesel | 10.21 | Climate Registry 2022 | gallons per barrel | 42 | 42 |
| diesel gas/btu | 137,381 | EIA 2023 | btu per gallon | 120,214 | 137,381 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Scenario | TOG (tons/year) | ROG (tons/yr) | Nox (tons/yr) | CO (tons/yr) | $SO_2$ (tons/yr) | PM10E (tons/yr) | PM10D (tons/yr) | PM10T (tons/yr) | PM2.5E (tons/yr) | PM2.5D (ton | PM2.5T (ton | $BCO_2$ (MT/ | $NBCO_2$ (MT/yr | $CO_2T$ (MT/yr) | $CH_4$ (MT/yr | $N_2O$ (MT/y | R (MT/yr) | $CO_2e$ (MT/ |
| Unmit. | 1.26 | 4.47 | 0.92 | 11.5 | 0.03 | 0.01 | 3.78 | 3.8 | 0.01 | 0.96 | 0.97 | 97.1 | 3190 | 3287 | 8.41 | 0.16 | 14.9 | 3558 |
| Mit. | 1.26 | 4.47 | 0.92 | 11.5 | 0.03 | 0.01 | 3.78 | 3.8 | 0.01 | 0.96 | 0.97 | 97.1 | 3132 | 3229 | 8.39 | 0.15 | 14.9 | 3499 |
| % Reduced | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.8 | 1.75 | 0.29 | 2.08 | 0 | 1.66 |

| Unmitigated | CO2e (MT/yr) |
|---|---|
| Mobile | 13944.0 |
| Area | 1028.0 |
| Energy | 8120.0 |
| Water | 259.0 |
| Waste | 1944.0 |
| Refrig. | 6.0 |
| Total | 25301.0 |

CA Energy Consumption

| Sector | Trillion BTU | Percentage |
|---|---|---|
| Residential | 1473.2 | 20.02% |
| Commercial | 1396.7 | 18.98% |
| Industrial | 1704.4 | 23.16% |
| Transporation | 2785.1 | 37.84% |
| Total | 7359.4 | 100.00% |

Source: https://www.eia.gov/state/seds/sep_sum/html/pdf/sum_btu_1.pdf

Unmitigated

| Max lbs/day | ROG | NOx | CO | $SO_2$ | PM10T | PM2.5T |
|---|---|---|---|---|---|---|
| Mobile | 12 | 8.18 | 66.7 | 0.14 | 145 | 16.5 |
| Area | 24.5 | 3.71 | 29.3 | 0.02 | 0.3 | 0.3 |
| Energy | 0.25 | 4.38 | 2.53 | 0.03 | 0.35 | 0.35 |
| Water | 0 | 0 | 0 | 0 | 0 | 0 |
| Waste | 0 | 0 | 0 | 0 | 0 | 0 |
| Refrig. | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 36.75 | 16.27 | 98.53 | 0.19 | 145.65 | 17.15 |

Mitigated

| Max lbs/day | ROG | NOx | CO | $SO_2$ | PM10T | PM2.5T |
|---|---|---|---|---|---|---|
| Mobile | 12 | 8.18 | 66.7 | 0.14 | 145 | 16.5 |
| Area | 24.5 | 3.71 | 29.3 | 0.02 | 0.3 | 0.3 |
| Energy | 0.09 | 1.6 | 1.34 | 0.01 | 0.12 | 0.12 |
| Water | 0 | 0 | 0 | 0 | 0 | 0 |
| Waste | 0 | 0 | 0 | 0 | 0 | 0 |
| Refrig. | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 36.59 | 13.49 | 97.34 | 0.17 | 145.42 | 16.92 |

Tons/year

Note: gasoline = worker emissions; Diesel = vendor + offroad eq

| Year | Gasoline | Diesel |
|---|---|---|
| 2025 | 123.88 | 970.45 |
| 2026 | 239 | 530 |
| 2027 | 235 | 525 |
| 2028 | 231 | 521 |
| 2029 | 163.26 | 406.02 |
| 2030 | 10.7 | 3.82 |

Unmitigated

| | Max Lb/day | | | | | | | | | | | | ave tons/year | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
| 2025 | 12 | 10.2 | 86.7 | 97 | 0.18 | 3.78 | 147 | 147 | 3.48 | 15 | 15.8 | 0 | 1088 | 1088 | 0.04 | 0.02 | 0.28 | 1095 |
| 2026 | 2.32 | 2.03 | 13.7 | 25.1 | 0.04 | 0.39 | 147 | 147 | 0.36 | 15 | 15.3 | 0 | 754 | 754 | 0.02 | 0.05 | 0.63 | 769 |
| 2027 | 2.23 | 11.37483 | 13 | 24.3 | 0.04 | 0.35 | 147 | 147 | 0.32 | 15 | 15.3 | 0 | 746 | 746 | 0.02 | 0.05 | 0.57 | 761 |
| 2028 | 2.09 | 11.37483 | 12.3 | 23.6 | 0.04 | 0.31 | 147 | 147 | 0.29 | 15 | 15.3 | 0 | 738 | 738 | 0.02 | 0.05 | 0.52 | 753 |
| 2029 | 2.03 | 11.37483 | 11.7 | 22.9 | 0.04 | 0.29 | 147 | 147 | 0.27 | 15 | 15.2 | 0 | 559 | 559 | 0.01 | 0.03 | 0.33 | 569 |
| 2030 | 0.26 | 11.37483 | 0.89 | 2.51 | < 0.005 | 0.01 | 24.4 | 24.4 | 0.01 | 2.49 | 2.5 | 0 | 14.4 | 14.4 | < 0.005 | < 0.005 | 0.01 | 14.6 |

Unmitigated TPY

| | PM10 | PM2.5 |
|---|---|---|
| 2025 | 9.16 | 1.21 |
| 2026 | 18.6 | 1.94 |
| 2027 | 18.6 | 1.94 |
| 2028 | 18.7 | 1.94 |
| 2029 | 13.3 | 1.39 |
| 2030 | 0.75 | 0.08 |

Mitigated

| | Max Lb/day | | | | | | | | | | ave tons/year | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | TOG | ROG | NOx | CO | $SO_2$ | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | $BCO_2$ | $NBCO_2$ | $CO_2T$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
| 2025 | 2.84 | 2.7 | 17.3 | 119 | 0.18 | 0.47 | 147 | 147 | 0.46 | 15 | 15.1 | 0 | 1088 | 1088 | 0.04 | 0.02 | 0.28 | 1095 |
| 2026 | 1.39 | 1.28 | 6.66 | 26.9 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15 | 15.1 | 0 | 754 | 754 | 0.02 | 0.05 | 0.63 | 769 |
| 2027 | 1.35 | 11.37483 | 6.41 | 26.2 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15 | 15.1 | 0 | 746 | 746 | 0.02 | 0.05 | 0.57 | 761 |
| 2028 | 1.25 | 11.37483 | 6.17 | 25.5 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15 | 15.1 | 0 | 738 | 738 | 0.02 | 0.05 | 0.52 | 753 |
| 2029 | 1.22 | 11.37483 | 5.93 | 24.9 | 0.04 | 0.09 | 147 | 147 | 0.08 | 15 | 15.1 | 0 | 559 | 559 | 0.01 | 0.03 | 0.33 | 569 |
| 2030 | 0.16 | 11.37483 | 0.75 | 2.36 | < 0.005 | < 0.005 | 24.4 | 24.4 | < 0.005 | 2.49 | 2.49 | 0 | 14.4 | 14.4 | < 0.005 | < 0.005 | 0.01 | 14.6 |

Mitigated TPY

| | PM10 | PM2.5 |
|---|---|---|
| 2025 | 8.99 | 1.05 |
| 2026 | 18.6 | 1.91 |
| 2027 | 18.6 | 1.91 |
| 2028 | 18.6 | 1.91 |
| 2029 | 13.3 | 1.37 |
| 2030 | 0.75 | 0.08 |

| | ROG (lb/day) |
|---|---|
| onsite total max daily | 3.06 |
| offsite total max daily | 0.06 |
| | |
| total paving 2029 max | 3.12 |

| | ROG (lb/day) |
|---|---|
| onsite total max daily | 2.55 |
| offsite total max daily | 0.06 |
| | |
| total paving 2029 max | 2.61 |

building construction rate

0.36 one-way trips/dwelling unit source: CalEEMod User guide

arch. coating rate

20% of building const. trips source: CalEEMod User guide

caleemod vehicle

trip rate 1.25 workers per equipment (except building const. and arch. coating)

# Appendix C

Biological Resource Reports for
Generations at Green Valley

California Tree and Landscape Consulting, Inc.

# Amended Arborist Report

**May 14, 2024**

Mr. Aidan Barry, Executive Vice President
TTLC Management, Inc
110 Blue Ravine Road, Suite 209
Folsom, CA 95630

c/o Jaren Nuzman

**Work location:**

**Green Valley Road Site and Off-Site Improvements**
**El Dorado County, CA 95682**

**Arborist Report for Oak Woodland Resources**
**For Project Development**

**APN:**
126-150-023
126-020-003
126-020-001
126-020-002
126-020-004
Off-Site Improvements

**Prepared by:**
**Gordon Mann, Consulting Arborist**

## Summary

The property is an approximately 288-acre parcel with proposed single-family residences, and 13 acres of off-site work. The property is bordered by smaller developed parcels on the west and southwest sides, larger single family parcels to the southeast, east, and north, and open space to the west. The property contains 2 ponds, oak woodland, and individual oak trees on pastureland. The biologists Madrone Ecological Consulting supporting the project confirmed the oak woodland and individual oak tree determinations. There are also off-site improvements that were added to the project area increasing the total area of the project to 301 acres (this includes the offsite infrastructure areas)., and a total of 110.9 acres of oak woodland. The breakout is 109.4 acres of oak woodland within the 288-acre onsite development and 1.5 acres in the 13-acre offsite infrastructure study area.

There are 109.4 acres of Oak Woodland on the site combined with 1.5 acres of oak woodland offsite for a total of 110.9acres of total oak woodland impact. A total of 56.0 acres of oak woodland is proposed to be impacted by the project. The oak woodland mitigation is based on 110.9acres of oak woodland and 56.0 acres of oak impact for a oak woodland impact [percent of 50.5%. There are a combination of 28 individual oak trees proposed to be removed and the total diameter inches for mitigation is 657 inches. There are 13 Heritage Trees in Fair or better condition proposed for removal with total diameter inches for mitigation of 572 inches.

The project is located south of Green Valley Road across from Malcolm Dixon Road, west of Marden Road, north of East Green Springs Road and east of Aberdeen Lane. The project design retains some open space on the northwest and southwest corners, and open space and parks in the northeasterly portion of the property. The oak woodland on the site was determined to cover 109.4 acres, 38.0% of the site.

The project also requires off-site work that was not included in the original site designs. The off-site impacts of the project were requested for analysis on November 29, 2023. The actual areas of impact and final design were not confirmed to provide the information necessary to calculate the actual amount of impact to the oak woodland and individual oak trees. The impacts referred to in this amended report are the maximum potential impacts to the total off-site areas, and most likely will be able to be reduced once the final designs are completed and we can verify the impacts that will occur. The oak woodland in the offsite is proposed at 100% impact until the designs are completed.

The additional off-site improvements to the project were added that were not covered in the initial Oak Resources Impact Report prepared on November 22, 2022 for the project assessment. The additional locations are covered in this addendum report. The off-site locations were visited on January 26th and February 6th, 2024 by Nicole Harrison, ISA Certified Arborist #WE-6500AM, and April 23, and April 26, 2024 by Gordon Mann, ISA Certified Arborist #WE-0151AM. All of the locations of the off-site improvements as identified on the Off Site Sewer and Water APE Exhibit prepared by CTA Engineering & Surveying dated November 2023; and the Onsite GVR APE Limit (Expanded APE), also by CTA were visited.

The areas included in the offsite assessment:

a) Green Valley Rd at Parcel 126-150-015: The construction is in the roadway and no off-site oak trees or oak woodland will be impacted by this proposed construction. No mitigation proposed.

b) Green Valley Rd at Parcel 126-150-016: No additional impacted oak trees. No mitigation proposed.
c) Green Valley Rd at Parcel 126-150-021: 1 additional individual tree is present but unlikely to be impacted..
d) North side of Green Valley Rd at Parcels 126-091-040; 102-190-027; 102-190-010; 102-190-011: Potential Heritage Tree additional impacts, 89 inches. $40,851 mitigation proposed until final design is completed.
e) South side of Green Valley Rd at Parcel 115-051-011: 1 additional individual tree is present, 19”, but unlikely to be impacted. 100% mitigation proposed, $2,907 until final design is completed.
f) Marden Drive: The woodland impact area included in the 1.5 acres.
g) Lima Way Connection: No additional trees along either side of the existing road are protected oaks. No mitigation proposed.
h) Green Springs Road (at parcel 126-231-007): Tree 999 is added to the individual tree removal list. It is a 20” Interior Live Oak. 20” x $153 = $3,060 additional mitigation proposed.
i) E. Green Springs: The woodland impact area included in the 1.5 acres..
j) S Loch Way at Highland St: The woodland impact area included in the 1.5 acres..
k) Loch Way: The woodland impact area included in the 1.5 acres..
l) Woodland beneath SMUD area: The woodland impact area included in the 1.5 acres..
m) Green Valley Road: The woodland impact area included in the 1.5 acres..
n) Highland Hills Lift Station: The woodland impact area included in the 1.5 acres.
o) St. Andrews Lift Station: No additional impacts. No mitigation proposed.
p) Silva Valley Parkway from the project connection to the existing system W. Glenmore to Harvard Way: No additional impacts. No mitigation proposed.

The total acreage of oak woodland impact from the off-site work is 1.5 acres, 52,272 square feet. There are 2 individual trees totaling 39 inches and 2 Heritage Trees totaling 89 inches that will be impacted at the 100% assessment level.

The percentage of off-site oak woodland acreage compared to the overall site was challenging to total due to the mileage of roadways and pathways and the linear coverage. The percentage of oak woodland for the areas being removed was considered 100% because the design was not completed to show less impact.

Therefore, when considering the mitigation ratio for calculations, the combination of the proposed oak impact on site of 54.5 acres at 49.8%, and 100% of the oak woodland in the offsite, the ratio for oak mitigation was calculated at the 1.5 times ratio.

Mitigation for the project is based on the combination of the onsite and off-site oak woodland impacts. The total mitigation is based on the removal of 54.5 acres of oak woodland on the site combined with 1.5 acres of off-site woodland, is 56.0 acres calculated at a 1.5:1 ratio, at the cost of $8,285 per acre. The total onsite adjusted acreage is increased to 84.0 total acres.

The total oak mitigation amounts to: 84 acres at $8,285 per acre ($695,940.00), 657 total diameter inches for 28 individual trees at a cost of $153 per inch ($100,521.00), and 572 inches for 13 Heritage Trees at a cost of $459 per inch ($262,548.00)

The total necessary mitigation for the project is $1,059,009.00.

The alternative option for the $1,059,009.00 oak woodland mitigation fee is to either provide equivalent dedicated acreage of oak woodland or plant trees on equivalent dedicated acreage with the necessary monitoring, or a blend of providing dedicated acreage or planting dedicated oak woodland acreage including monitoring and pay any acreage balance difference with mitigation fees.

## Assignment

The subject property is a 288-acre parcel with a proposed development for roads, single-family homes, open space, a park, and a clubhouse as components of the project. There are oak woodland, individual oak trees, and Heritage trees that will be impacted or removed by the proposed development.

The client contacted our office on January 17, 2021, provided a site plan, and requested we provide an inspection and report required to satisfy the County of El Dorado's Oak Woodland Resources, determining the oak woodland area, identifying all native oak trees in the woodland area 24 inches in diameter and greater, all Heritage Trees 36 inches in diameter and greater, and any individual oak trees 6 inches and greater located outside of the woodland designation for tree removal and will need mitigation based on the County ORMP Oak Resources requirements and Ordinance No. 5061. We provided a proposal that was accepted and this report is the result of the onsite inspection performed on February 22, 23, and March 4 and 5, 2021, and the use of aerial imagery.

## Assignment limits

The Oak canopy was calculated based on Madrone Ecological Consulting's oak woodland assessment and mitigation summary dated January 8, 2020 (image in Appendix A). All the trees in the inventory were observed and verified while standing on the ground. Data collected is limited to a visual ground inspection. Ground inspections and measurements were used to ensure the accuracy of the inspection data.

## Current Existing Tree Status (general)

The site is a polygon shaped parcel lot with a triangle on the northeast upper right area on top of a rectangle. The development is required to comply with the El Dorado County ORMP Oak Resources requirements and Ordinance No. 5061.

The site was inspected on February 22 and 23, and March 4 and 5, 2021 by Cathie Bown, ISA Certified Arborist #WE 13086A, Cory Kinley, ISA Certified Arborist 9717A, Dave Mercado, ISA Certified Arborist 7311A, and Gordon Mann, ISA Certified Arborist #WE-0151AM, using 2, 3, and 4-person crews. The site is existing oak woodland, pasture with individual oaks, and 2 ponds, with cattle grazing. The trees in the oak woodland and the individual oak trees as laid out by the team biologist were inspected. Individual oak trees were captured if six inches diameter and larger, or multi-stem individual oak trees 10" diameter or larger. Oak woodland trees were captured that were 24 inches diameter and larger. A total of 659 oak trees were captured. The primary species are Blue Oak (*Quercus douglasii*), 464, and Interior Live Oak (*Quercus wislizenii*), 180. There were six Valley Oak (*Quercus lobata*) 3 Oracle Oaks (*Quercus x morehus*), 2 Black Oak (*Quercus kelloggii*), and 4 other non-protected species. No individual or Heritage Valley Oak trees or Valley Oaks in the oak woodland areas were found to be impacted. There are twenty-six (26) individual Oak trees to be

impacted, and eleven (11) Heritage trees to be impacted. There are 54.2 acres of Oak woodland to be impacted.

The oak woodland on the site was identified by the biologist team and found to be 109.4 acres, 38.0% of the 288 acre site. The proposed oak woodland impact for the onsite area of this property will be 54.5 acres of the existing 109.4 acre oak woodland, or 49.8% of the oak woodland.

There were sixteen off-site areas (shown on the map in the appendix) added that may be impacted by the off-site utility improvements to make the project successful. The final design and total impacts of the off-site locations were not available at the time of the site inspections, and the actual impacts could not be determined. The oak impacts are proposed at 100% of the impacts, and the actual total oak impacts will be determined once the designs are completed. The final impacts may be a lesser amount that may revise the total oak woodland, individual tree, and Heritage Tree impacts for the off-site work and may reduce the impacts for the entire project. The total oak woodland acreage of the off-site areas is 1.5 acres of 100% oak woodland impact for a total oak woodland impact of 56.0 acres, amounting to a total oak woodland impact of the 110.9 acres, equaling of 50.5% total oak woodland impact.

## Technical Recommendations

It is recommended that all tree care follow specifications written in accordance with ANSI A-300 standards. Pruning of the trees should be performed in the outer portion of the canopy to reduce leverage and end weights and allow the center of the canopies to grow and fill in with foliage. It is also recommended that when root pruning, the smallest size roots as possible be pruned, cuts be performed with handsaws, loppers, or chainsaws appropriate for the size of the root being cut. The roots should be exposed by excavating prior to cutting. Roots should be pruned prior to root removal within the tree protection area to limit the damage and tearing of roots back towards the tree. Root pruning should be overseen by a qualified arborist.

Tree protection for individual trees and groves or clusters of trees can be achieved by placing a fence along the outside edge of the tree canopies before any clearing, grubbing, or construction is started. The tree protection shall be written on the construction plans so the workers are aware of the tree protection zone.

The proposed Firewise Fuel Modification is necessary to provide the fire protection for development in and near oak woodland areas. The proposed fuel modification pruning treatments are in alignment with the Firewise protocols. The intended modification treatments will reduce the fire potential while retaining the approximate oak woodland canopy cover without removing large trees. The pruning and low clearance required for the treatments will have minimal impact to the overall oak woodland canopy cover and will not impact the oak woodland acreage as the trees are retained on site. No mitigation should be required for the pruning treatments.

The fuel modification plan for the property is described for the open space areas and spaces along the general project development. Because individual homes designs are not provided, the individual home Firewise practices will be provided when the home designs are proposed for building permits.

Tree planting should follow the specifications included in Appendix A.

## General Tree Care and Maintenance

The appendix information is given so that an onsite landscape manager can properly take care of the retained trees, and newly planted trees. Established native oak trees do not like to have the base of the trunk or their roots and the surrounding soil disturbed or tampered with. Applying or having unintentional landscape water in the root zone can cause catastrophic and negative affects to most species of native oak trees. Newly planted oak trees do need their root balls watered until established and then may need supplemental watering during extended periods of dry or hot weather. It is, therefore, recommended that the landscape be designed using drought tolerant plants that will require little to no watering after establishment. Irrigation should be delivered using an on-surface drip type system that does not require trenching around the oak trees to install. The plants should be spaced at least 6 feet away from the trunk of native oak trees, and the drainage from irrigation should be managed so water does not flow to the trunks of the oak trees. Trees that are growing in high use areas should be inspected by a qualified arborist for tree risk on a routine basis, the frequency depending on site use and tree condition.

## Observations

The site was inspected on February 22, 23, and March 4 and 5, 2021. Cathie Bown, ISA Certified Arborist #WE 13086A, Cory Kinley, ISA Certified Arborist 9717A, Dave Mercado, ISA Certified Arborist 7311A, and Gordon Mann, ISA Certified Arborist #WE-0151AM inspected the trees and verified the canopy. The trees 24 inches diameter and greater in the oak woodland and all individual oak trees were tagged and measured. There were 601 trees 24 inches in diameter or greater on site, 129 of these are Heritage Trees, 36 inches in diameter and greater, and 54 individual trees greater than 6 inches diameter less than 24 inches in size (and 4 non-protected oaks captured) growing on the site.

The 16 off-site locations were visited on January 26th and February 6th, 2024 by Nicole Harrison, ISA Certified Arborist #WE-6500AM, and April 23, and April 26, 2024 by Gordon Mann, ISA Certified Arborist #WE-0151AM. There were 1.85 acres of total oak woodland for the several sites, 39 diameter inches of individual oak trees, and 89 diameter inches of Heritage Trees.

Individual trees 6 inches diameter or greater or multi-stem trees 10 inches diameter or greater and the trees growing in the oak woodland 24 inches in diameter or greater were numbered, measured for diameter, assessed for condition, the number of stems present, and notes explaining the tree characteristics affecting condition were recorded. The tree data is shown in the attached 36-page Generations Tree List. The impacted trees are shown in Appendix 2 Individual and Heritage Tree Lists. The off-site trees were added to the original list.

The tree condition rating is a combination of vigor, structure, trunk, branches, trunk flare, live tissue, and defects and decay or pests. It is described in % and range term. The rating scale is:

| Range | # Rating | Description |
|---|---|---|
| Excellent | 81-100 | Found to have none to few defects or decay, and high vigor |
| Good | 61-80 | Found to have few defects or decay, and above average vigor |
| Fair | 41-60 | Found to have mitigatable defects, limited decay, and average vigor |
| Poor | 21-40 | Found to have significant defects, decay, and lower vigor |
| Very poor | 1-20 | Found to have significant defects, decay, and low declining vigor |
| Dead | 0 | Found to be dead |

Diameter at Breast Height (DBH) is the industry standard for measuring trunk diameter. For trees with straight trunks and normal taper, the measurement is taken at 4.5 feet above grade. When a swollen area, flare from branching, multiple stems, or other abnormal growth is present, the diameter at 4.5 feet would not be characteristic of the subject tree. Therefore, the measurement is taken at the most appropriate location for determining the reasonable trunk diameter, and the height the measurement was taken is listed with the diameter measurement if not at 4.5 feet. For trees found 24 inches or greater the accurate measurement was taken with a diameter tape to confirm the size. The County requires mitigation for trees 36” diameter and greater, in fair or better condition of Heritage Trees.

## Other testing or examination:

No additional testing or examination was requested at the time of the inspection or found necessary.

## Discussion:

The project site is approximately 288 acres and contains oak woodland, pastures and individual oak trees, and 2 ponds. The adjacent properties range from smaller lot single family homes, larger lot single family homes, and oak woodland open space. The development proposes 379 single-family lots and is bordered by a small sized single-family lots to the west and southwest. There are larger single family lots on the south, east, and north sides of the property.

The oak trees on the property around the proposed construction and development were inspected. The site plan was reviewed to identify those trees that are close to the development needing protection and those trees that will be impacted by the proposed development. There were 54 individual oak trees smaller than 24 inches diameter outside of the oak woodland. There are 26 individual oak trees that will be impacted by the project, for a total of 618 diameter inches. There were 129 Heritage Trees included in the inspection and 11 will be impacted by the construction, with for a total of 483 diameter inches. All oak woodland canopy around the development area was evaluated for mitigation requirements. The oak woodland to the east and west of the property are not impacted and only the edge trees were included in the inspection and assessment.

The El Dorado County Oak Resource Mitigation calculation is based on the area of oak woodland impacted, the percent of oak woodland being impacted, the individual oak trees growing outside of oak woodland being impacted, and Heritage Trees both in oak woodlands and individual trees being impacted. The total property area is approximately 12,545,280 square feet or 288 acres. The total oak woodland on the property is 4,765,464 square feet or 109.4 acres. The oak woodland coverage is 38. % of the total site area.

The total oak woodland proposed for removal and impact for the project is 2,374,020 square feet or 54.5 acres. The total amount of oak woodland impacted by the development is 49.8%. The Oak Woodland Mitigation Ratio is determined by the amount of existing Oak Woodland canopy being impacted.

The total acreage of oak woodland impact from the off-site work is 1.5 acres, 65,340 square feet. There are 2 individual trees totaling 39 inches and 2 Heritage Trees totaling 89 inches that will be impacted at the 100% assessment level. The percent of oak woodland impact was considered at the 100% level until the final design is completed. This additional impact has increased the total project impact to above 50% and the 1.5:1 ratio has been used in the calculations. The mitigation acreage of the offsite areas at the 1.5 ratio are 2.25 acres.

The project calculations for oak woodland were adjusted for the 1.5:1 ratio. The total oak mitigation of 56 acres amounts to: 84 acres. The individual oak trees total 657 diameter inches for 28 individual trees. The Heritage Trees total 572 inches for 13 Heritage Trees.

The mitigation ratio chart for El Dorado County ORMP is:

| Percent of Oak Woodland Impact | Oak Woodland Mitigation Ratio |
|---|---|
| 0-50% | 1:1 |
| 50.1 – 75% | 1.5:1 |
| 75.1-100% | 2:1 |

The proposed total project oak woodland impact of greater than 50% falls into the Oak Woodland Impact range of 0-50%. The proposed oak woodland impact requires a 1.5:1 mitigation ratio.

Mitigation – Individual Native Oak Tree/Heritage Tree Removal. If Individual Native Oak Trees, including Heritage Trees, will be impacted as part of the permit, the applicant shall mitigate for loss of individual tree(s) by one or more of the following options as specified in the ORMP:

a. In-lieu Fee payment for individual oak tree removal to be either used by the County to plant oak trees or to be given by the County to a land conservation organization to plant oak trees as shown in Table 6 (Individual Oak Tree In-Lieu Fee) in the ORMP;

b. Replacement planting on-site consistent with Section 2.4 (Replacement Planting Guidelines) of the ORMP within an area subject to a Deed Restriction or Conservation Easement and utilizing the replacement tree sizes and quantities shown in Table 4 (Oak Tree Replacement Quantities) in the ORMP. On-site replacement planting shall be consistent with Section 2.4 (Replacement Planting Guidelines) of the ORMP;

c. Replacement planting off-site within an area subject to a Conservation Easement or acquisition in fee title by a land conservation organization utilizing the replanting sizes and quantities specified in Table 4 (Oak Tree Replacement Quantities) in the ORMP. Off-site replacement planting shall be consistent with Section 2.4 (Replacement Planting Guidelines) of the ORMP; or
d. A combination of options a through c above.

The proposed onsite 56 acres of total impacted acres of oak woodland at the 1.5 ratio will require mitigation equivalent acreage of onsite or off site planting and oak woodland deed restrictions, or an in lieu payment of $8,285.00 per acre for 84 aces with a maximum mitigation fee of $694,940.00.

There were 28 impacted individual oak trees, 657 diameter inches, and required individual oak tree mitigation of $100,521.00.

There were 13 impacted Heritage Trees in Fair or better condition, 572 diameter inches and the required Heritage Tree mitigation of $262,548.

The total mitigation fee for the proposed project will be $1,059,009.00. The fee may be adjusted by either oak woodland acreage planted onsite, or onsite or off site dedicated oak woodland acreage.

The oak woodland mitigation requirements for the project was calculated based on the following information:

**Total area of the project area: 13,111,560 square feet, or 288 acres (Offsite acreage 13).**
**Total area of oak woodland: 4,830,804 square feet, or 110.9 acres**
**Total percent of existing oak woodland: 37.3.0%**
**Total area of total oak woodland to be removed: 2,439,360 square feet, or 56.0 acres**
**Total percent of oak woodland to be removed: 50.5%**
**Oak Woodland Mitigation Ratio: 1.5:1**
**Oak woodland area of sick/dying trees exempt from mitigation 0 square feet or 0 acres**
**Total area of Oak Woodland to be mitigated: 2,441,538 square feet, or 56.0 acres at the 1.5 ratio = 84 acres at $8,285, $695,940.00**
**Total number and diameter inches of individual oak trees to be removed: 28 trees, 657 diameter inches: $100,521.00**
**Total number and diameter inches of Heritage Trees to be removed: 13 trees, 572 diameter inches: $262,548.00**
**Total area of pre-mitigated oak canopy to be removed: 0 sq. ft.**
**Total area of oak canopy required to be mitigated: 2,441,538 square feet, or 56.0 acres x 1.5 ratio = 84.0**
**Total Oak Woodland Area Impacted Mitigation: 84.0 acres @ $8,285 per acre = $695,940.00**
**Individual Oak tree Impacted Mitigation: 28 trees, 657 inches, $153 per inch: $100,521.00**
**Heritage Tree Impacted Mitigation: 13 trees, 572 inches, $459 per inch: $262,548.00**

**Total Amount of Oak Resource Mitigation: $1,059,009.00**

With the proposed mitigation of in lieu payments for individual oak trees and Heritage trees, and the options for dedicated oak woodland acreage or payment of the in lieu fees, the proposed project is in compliance with the Ordinance 5061, Oak Resources Conservation.

The project is in compliance with General Plan Policy 7.4.5.2 by preserving native oaks wherever possible on the site. There are areas of oak woodland or oak corridors in this development in areas retained as natural open space areas on the west side and north side of the project. This report also provides information how trees in the vicinity of the project or construction site will be protected and by following approved preservation methods specified in the County's required mitigation measures.

It has been determined that the proposed project would result in less than significant impacts to oak woodland resources with incorporation of mitigation measures listed below.

For long term maintenance and the changes in site use, some pruning should be performed to larger trees close to the proposed structures and rear yard areas. For Firewise management, trees should be pruned for clearance and elevate low branches and break ladders. The pruning should be performed to remove large dead branches, shorten and reduce end weights which reduces the risk of branch failure. The Firewise clearance pruning will elevate trees and remove low bushes and separate crown ladders. The pruning will have overall minimum impact on the total site oak woodland acreage as the trees are being retained when pruned.

## Conclusion:

The proposed single-family home project will impact the existing oak woodland. Per the El Dorado County Oak Resources Conservation Ordinance mitigation will be required for 1 of the three potential 3 impacts:

1. Oak woodland is proposed to be impacted. There are 56.0 acres of Oak Woodland proposed to be impacted, and this is greater than 50% of the total oak woodland area due to the proposed 100% of the off-site project work. The mitigation ratio is 1.5:1 times the acreage impacted, equaling 84.0 acres of oak woodland mitigation required. The option is to dedicate existing oak woodland or plant oak woodland onsite or off site in equal acreage, or pay the in lieu fee for the 84. acres at $8,285 per acre to a maximum amount of $695,940.00 in mitigation fees. A combination of oak woodland dedication onsite or offsite and in lieu fee payment will also satisfy this requirement.

2. There are 28 individual oak trees proposed to be impacted with 657 total inches of diameter. The cost for mitigation is $153 per inch. The cost of the 28 trees is $100,521.00 in mitigation fees.

3. There are 13 Heritage Trees, trees with a single, or multiple combined, trunk diameter of 36 inches or greater, in fair and better condition, proposed to be impacted with 572 total inches of diameter. The cost for mitigation is $459 per inch. The cost of the 13 trees is $262,548.00.

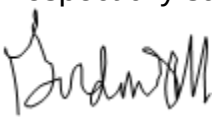
The required mitigation fee for individual oak trees and Heritage trees is $363,069. The oak woodland acreage can either be planted onsite or off site dedicated oak woodland acreage, or an in lieu payment of $695,940.00. The applicant requests to retain the option to blend the oak woodland acreage dedication or in lieu payments up to a total mitigation cost of $1,059,009.00.

The mitigation proposed will meet the required mitigation based on the El Dorado County ORMP Oak Resources requirements and Ordinance No. 5061.

Please contact Gordon Mann of California Tree and Landscape Consulting, Inc., if there are any questions about this report.

Disclaimer: Gordon Mann, has analyzed the situation, applied the proper method(s) utilized within the profession, and performed a reasonableness test to support the project tree related decisions. I, nor the employees or subcontractors of California Tree and Landscape Consulting, Inc., may be held liable for the misuse or misinterpretation of this report. As the author of this report, I do hereby certify that all the statements of fact in this report are true, complete, and correct to the best of my knowledge and belief, and that they are made in good faith.

Respectfully submitted,



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ISA TRAQ Qualified Tree Risk Assessor
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Gordon@caltlc.com
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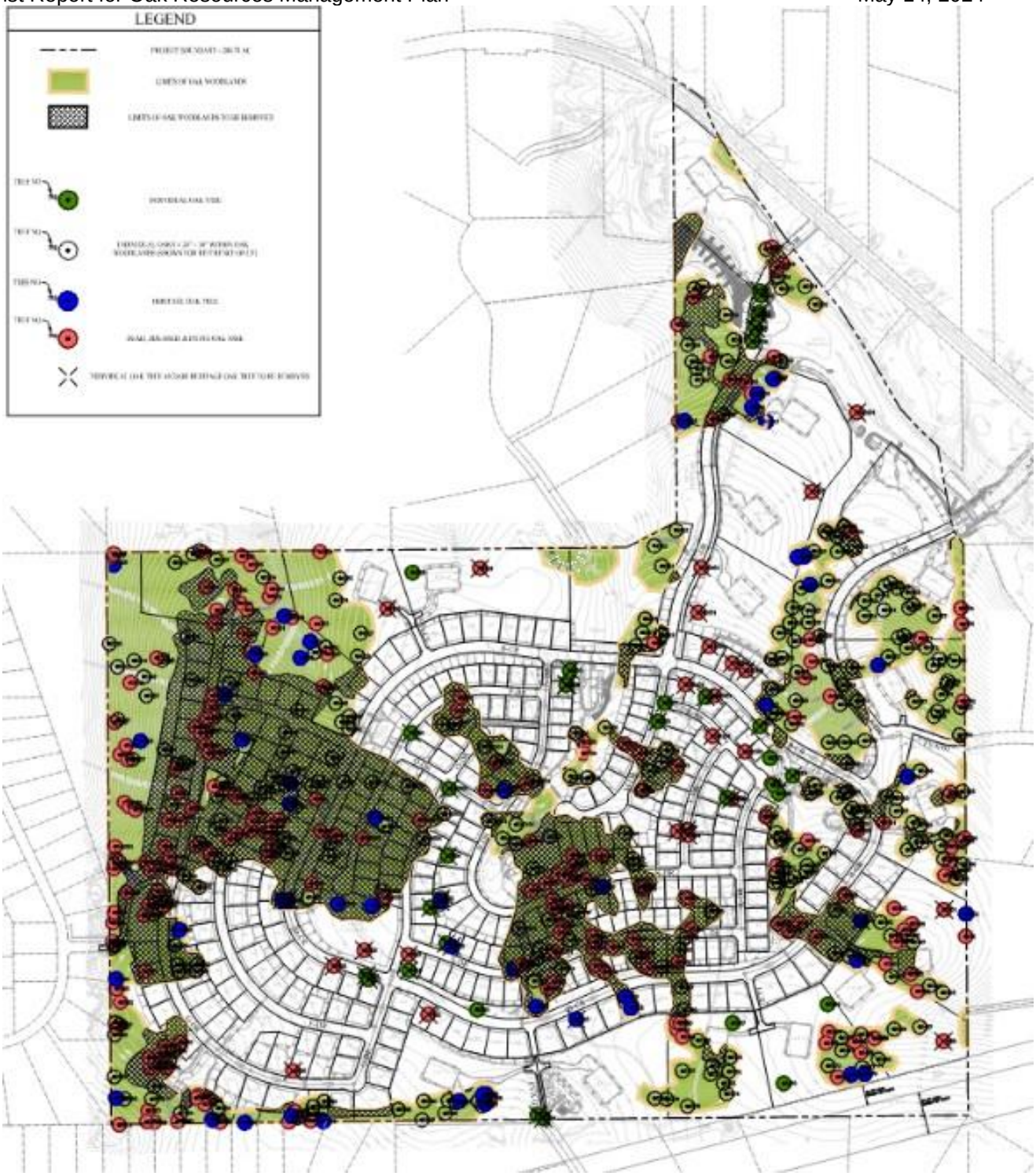
Appendix A Onsite Images
Appendix B Off-site Images

Appendix B Tree Lists for Heritage and Individual Tree Removals
Appendix C General Tree Protection
Appendix D Long Term Landscape Maintenance Plan and Specifications
Appendix E Avoiding Damage During Construction
Appendix F Tree Planting Specifications
Disclosure, Limitations, Resume for Gordon Mann, Certificate of Performance

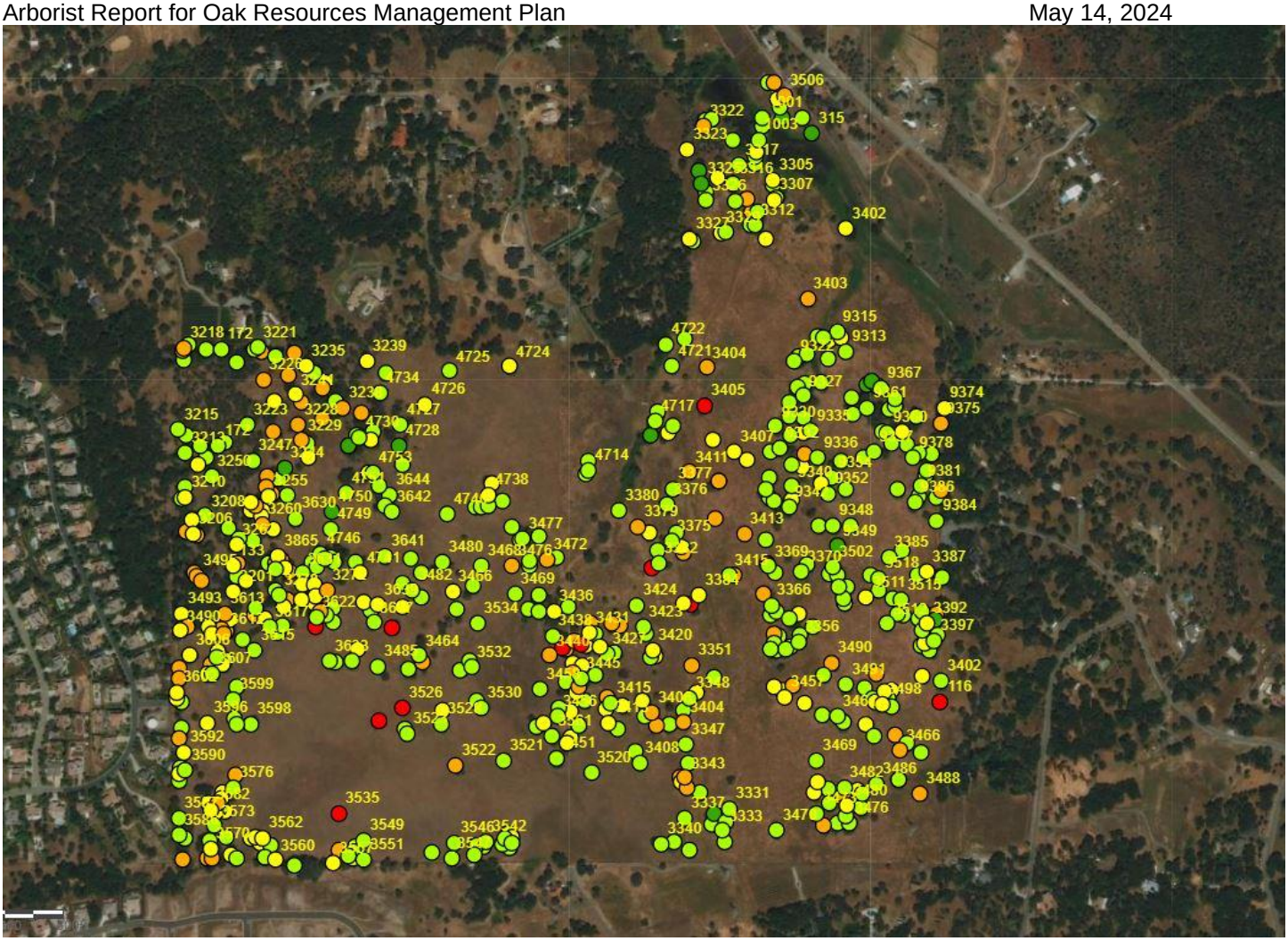
## Appendix A Images




Madrone's Oak Woodland and Individual Oak Tree Onsite Survey



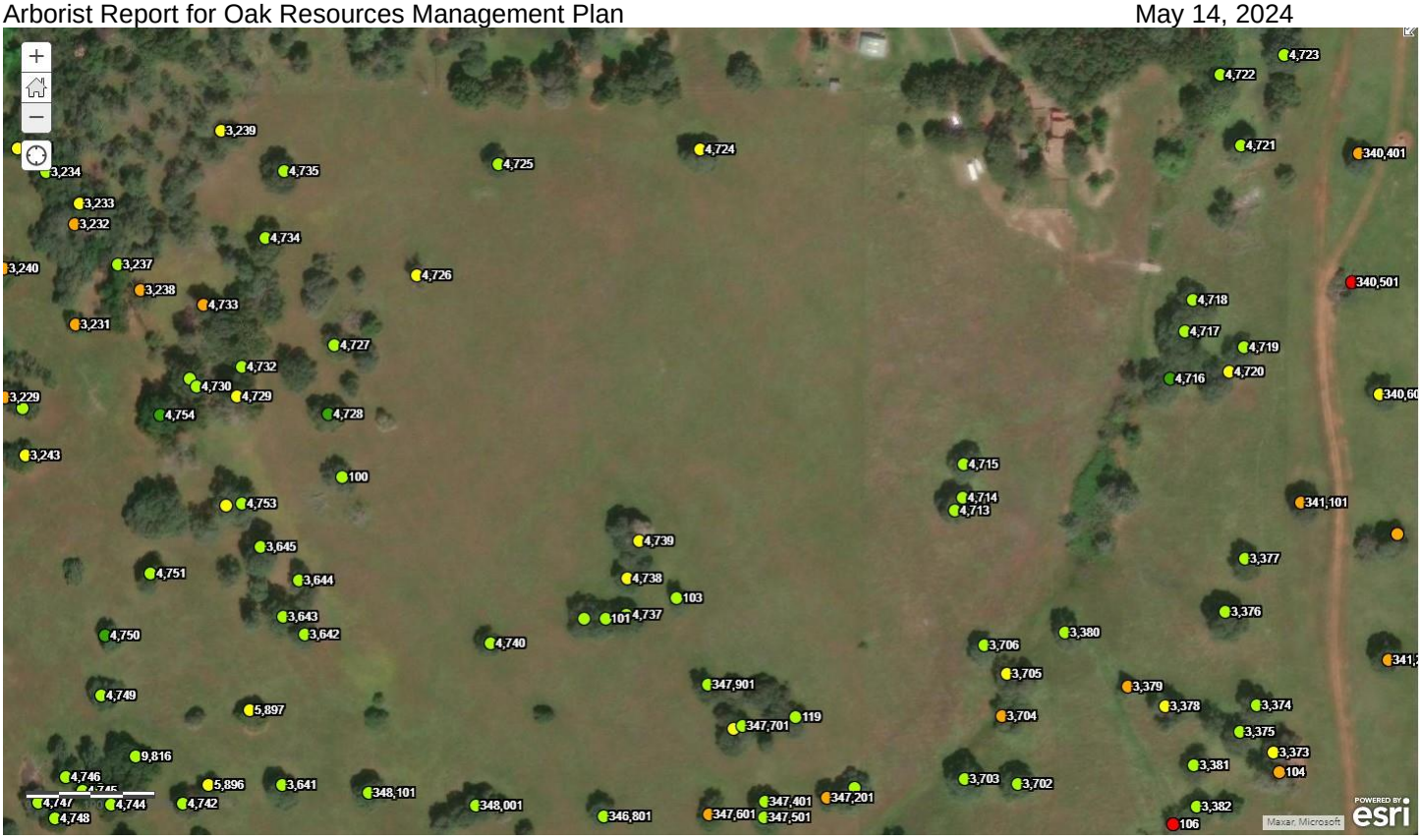

Onsite site plan image with trees inspected for the project
Oak woodland light green,
proposed removals within oak woodland hashed/dark green,
Individual Oaks to be removed x's



Aerial showing onsite tree numbers in approximate locations

8 Aerial images with onsite tree numbers in approximate locations enlarged:

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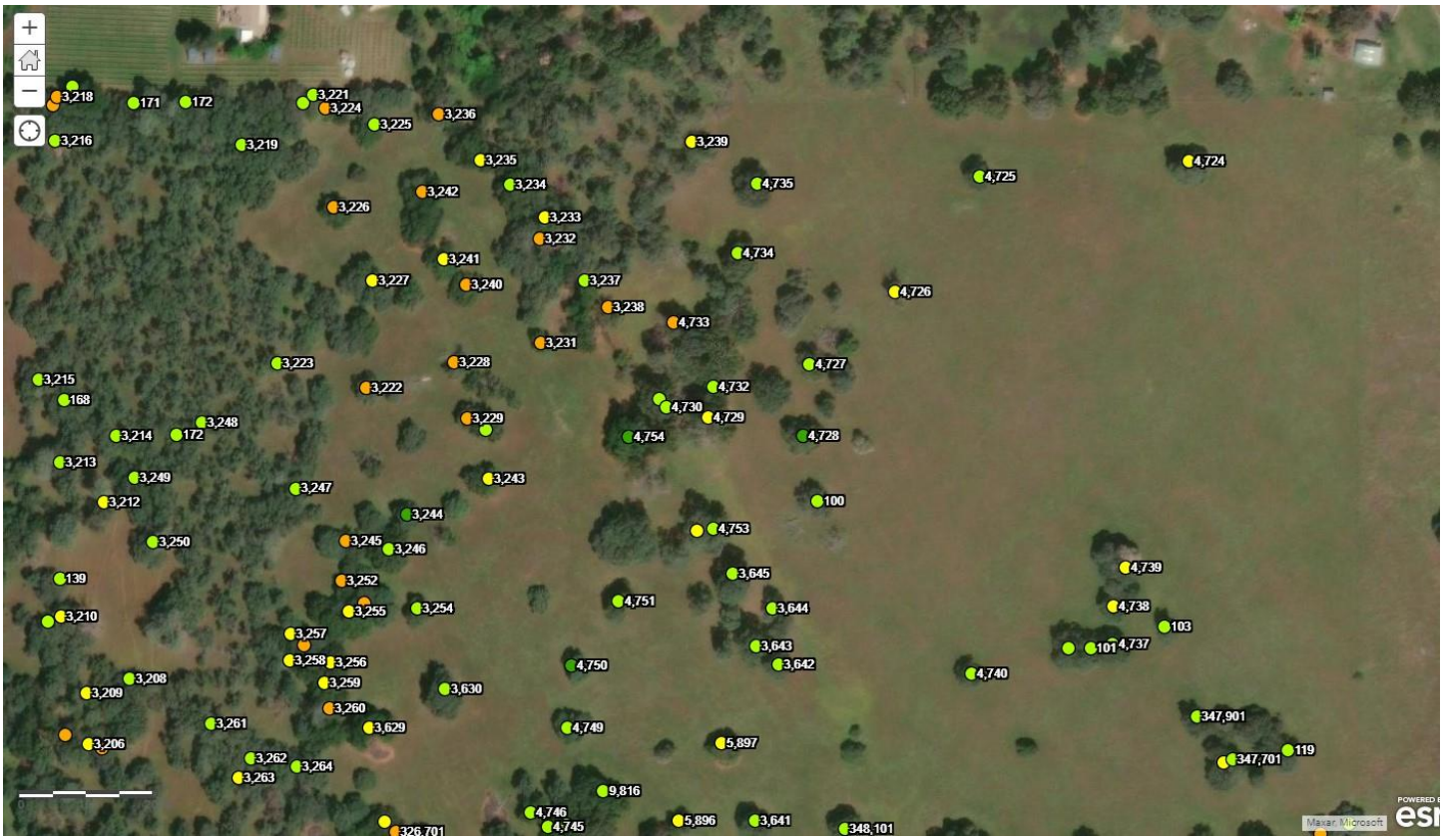
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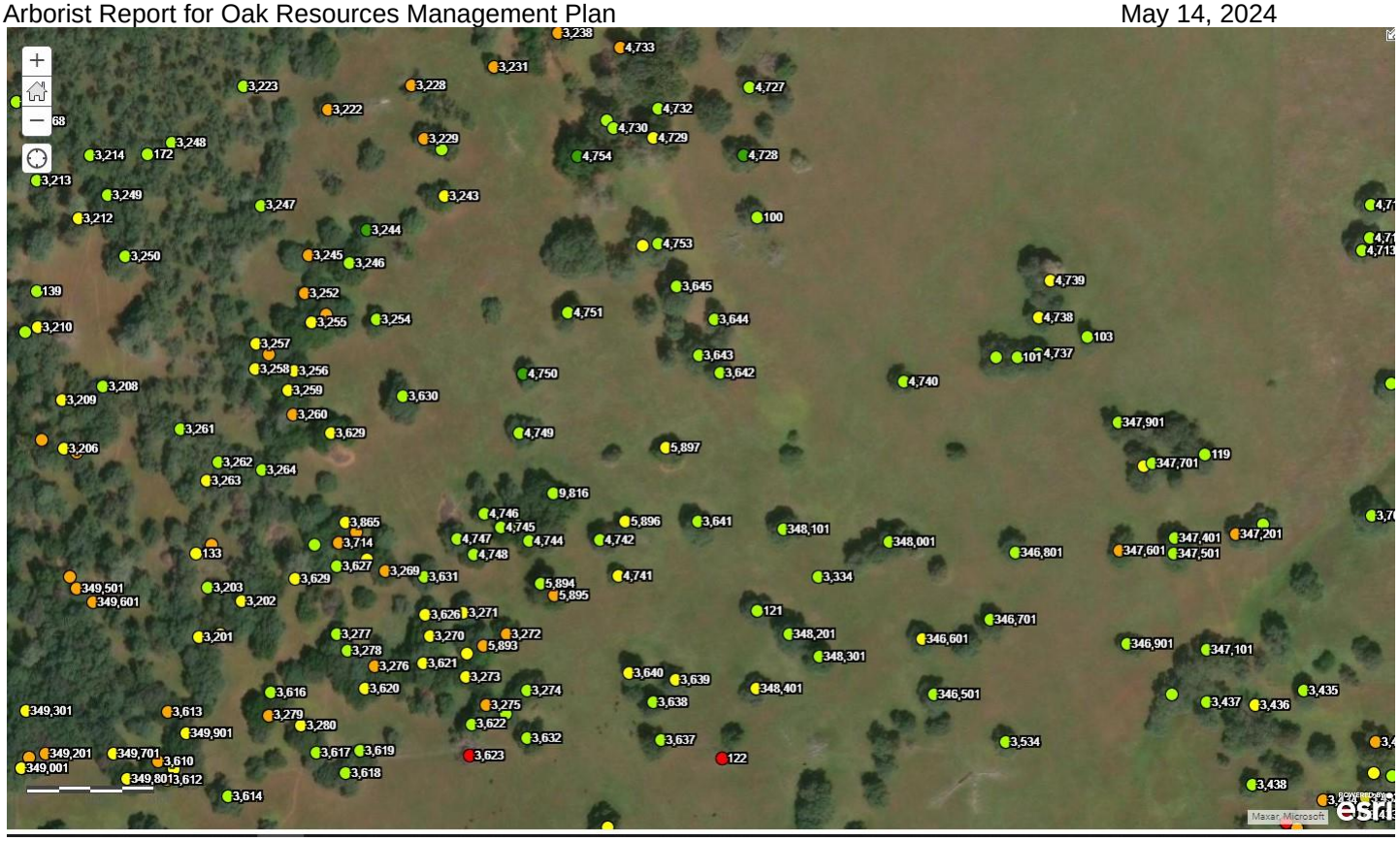
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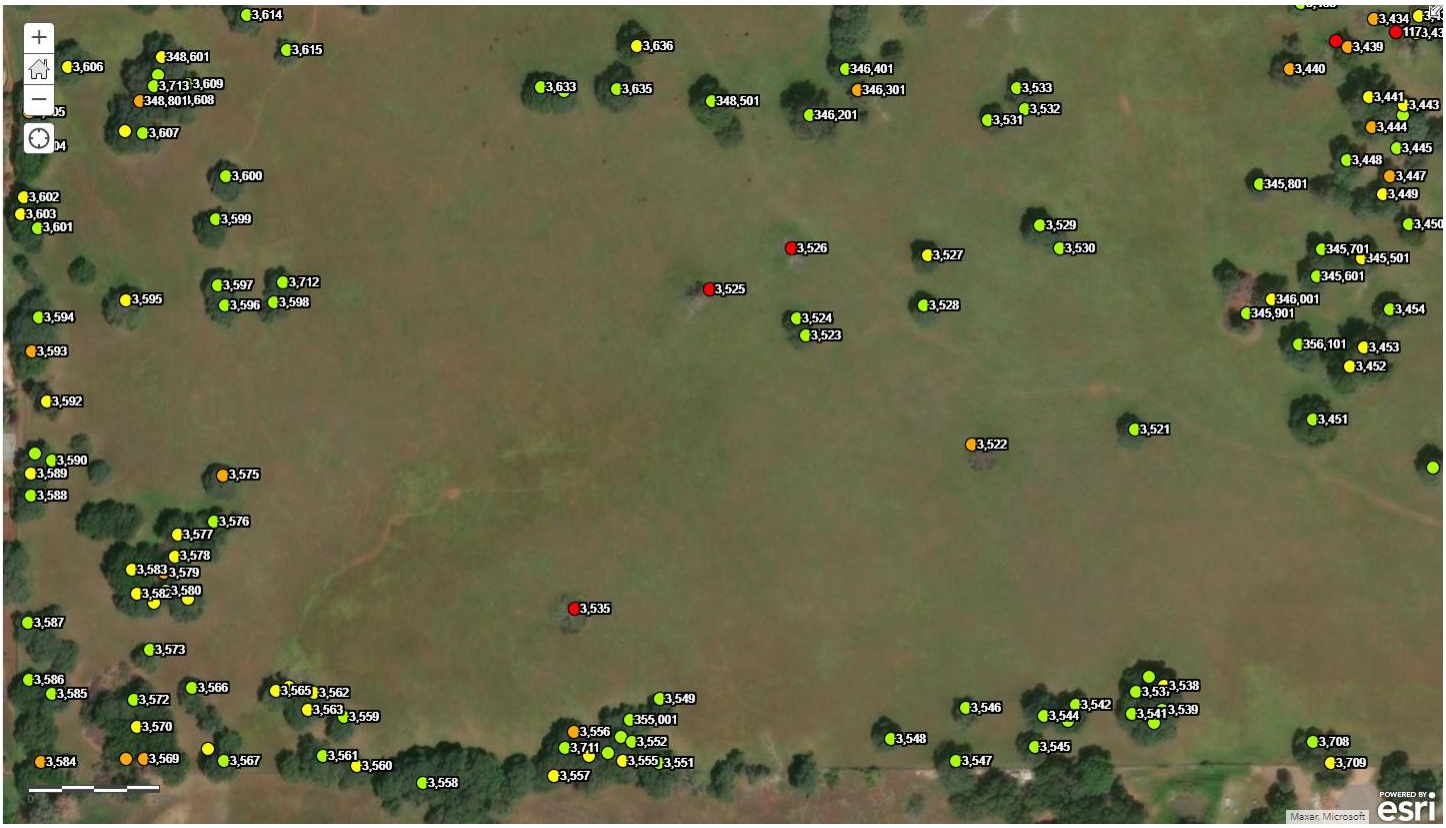
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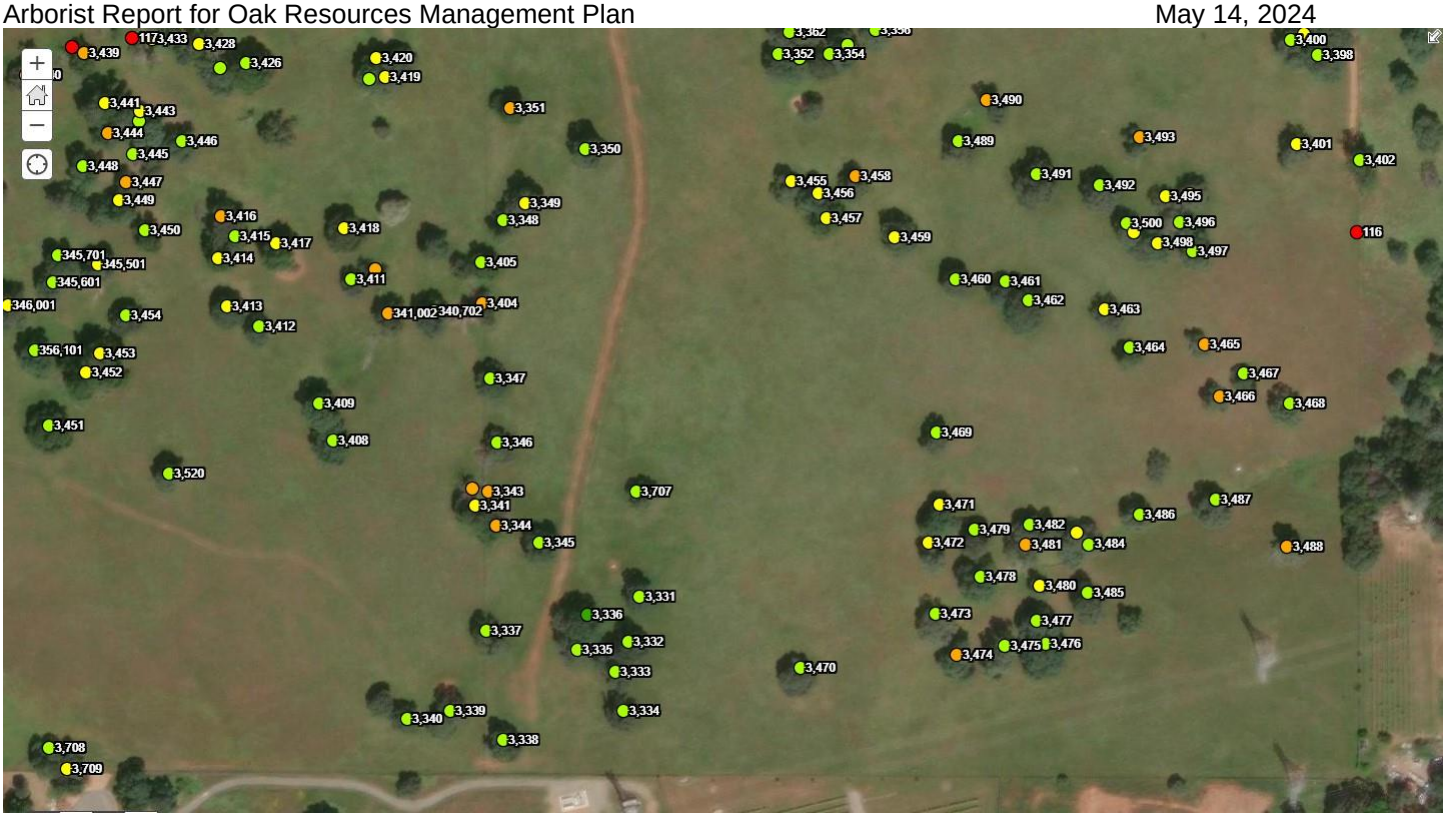
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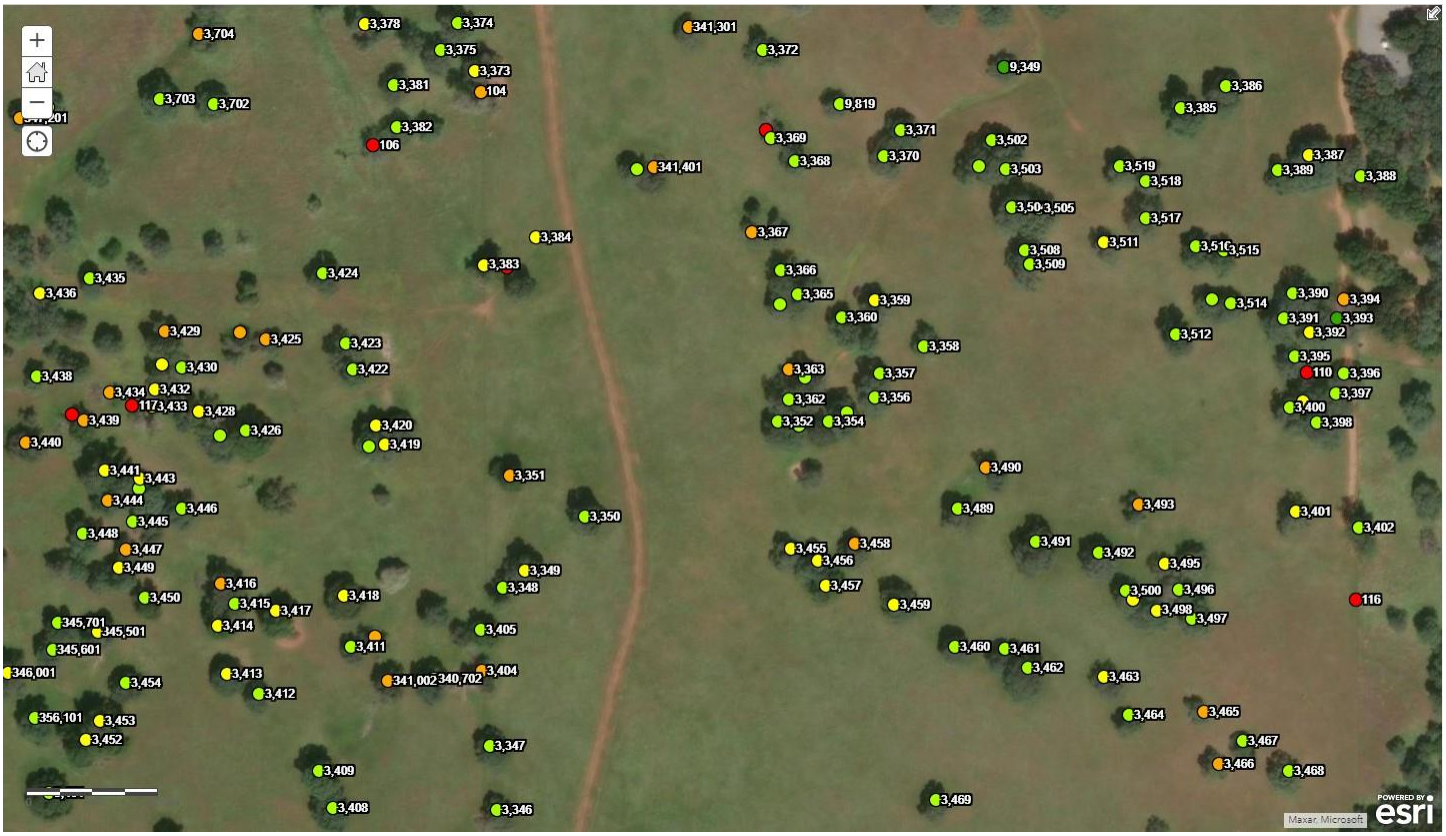
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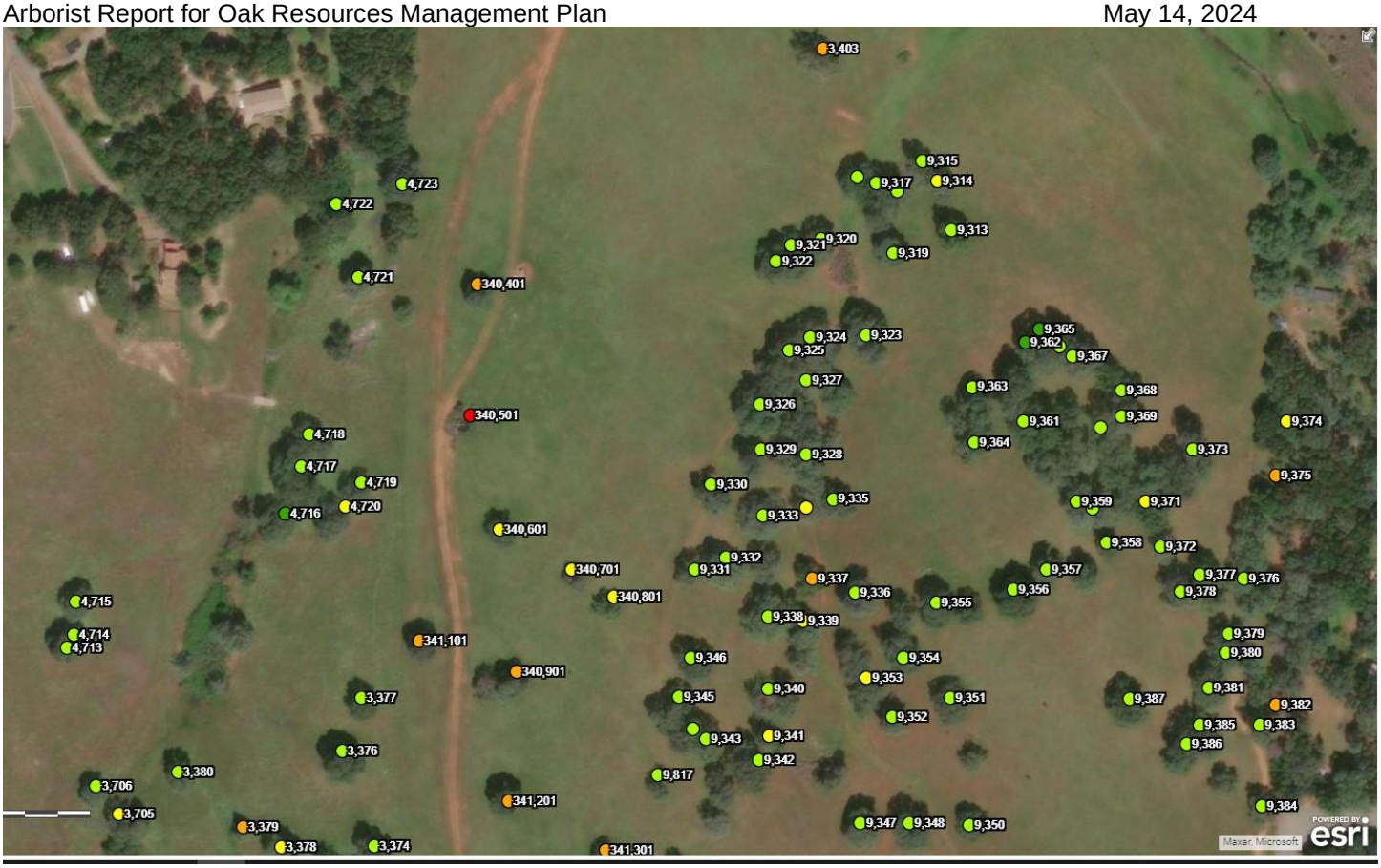
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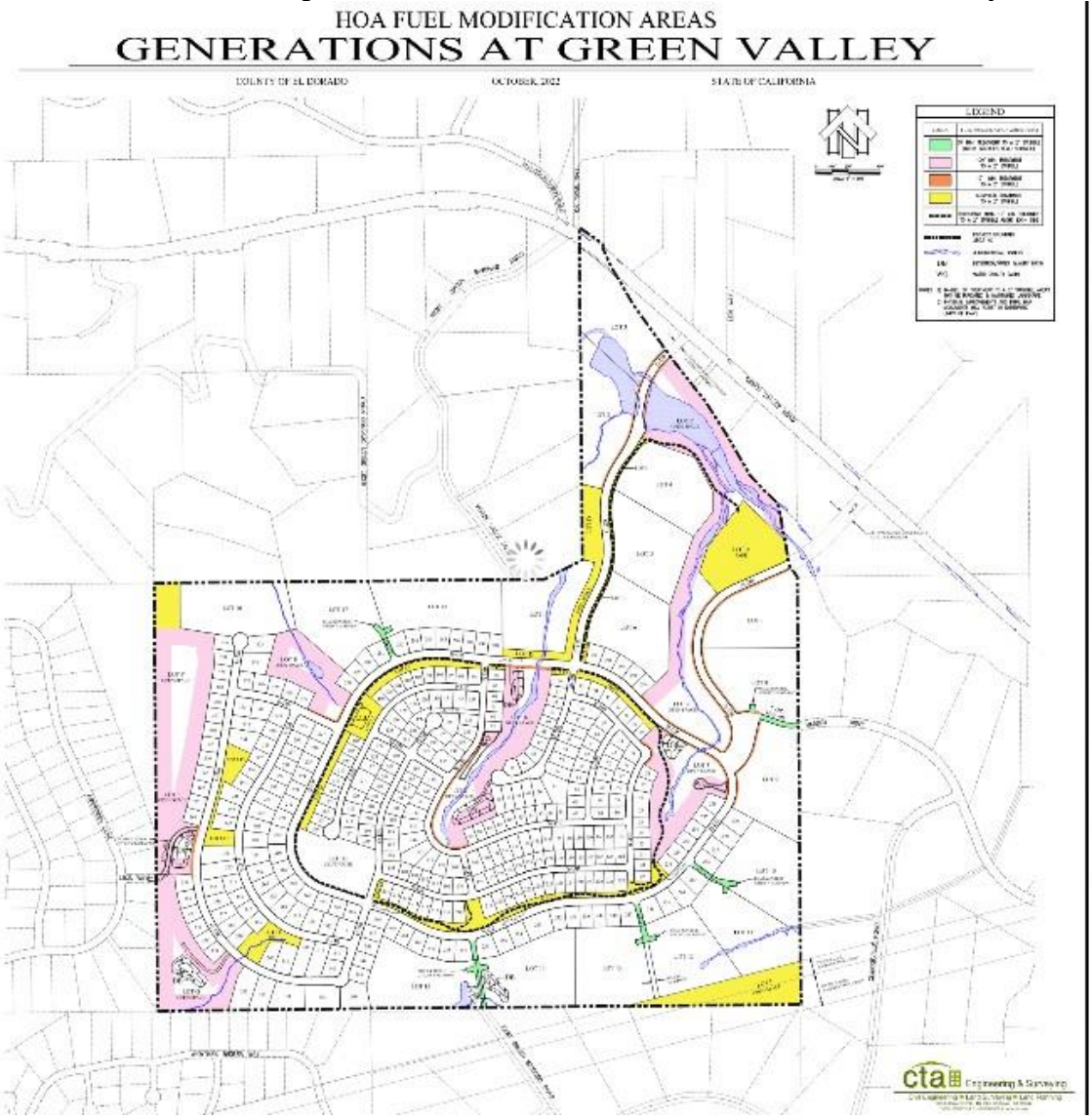
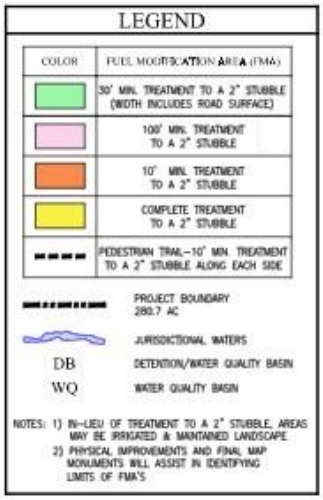
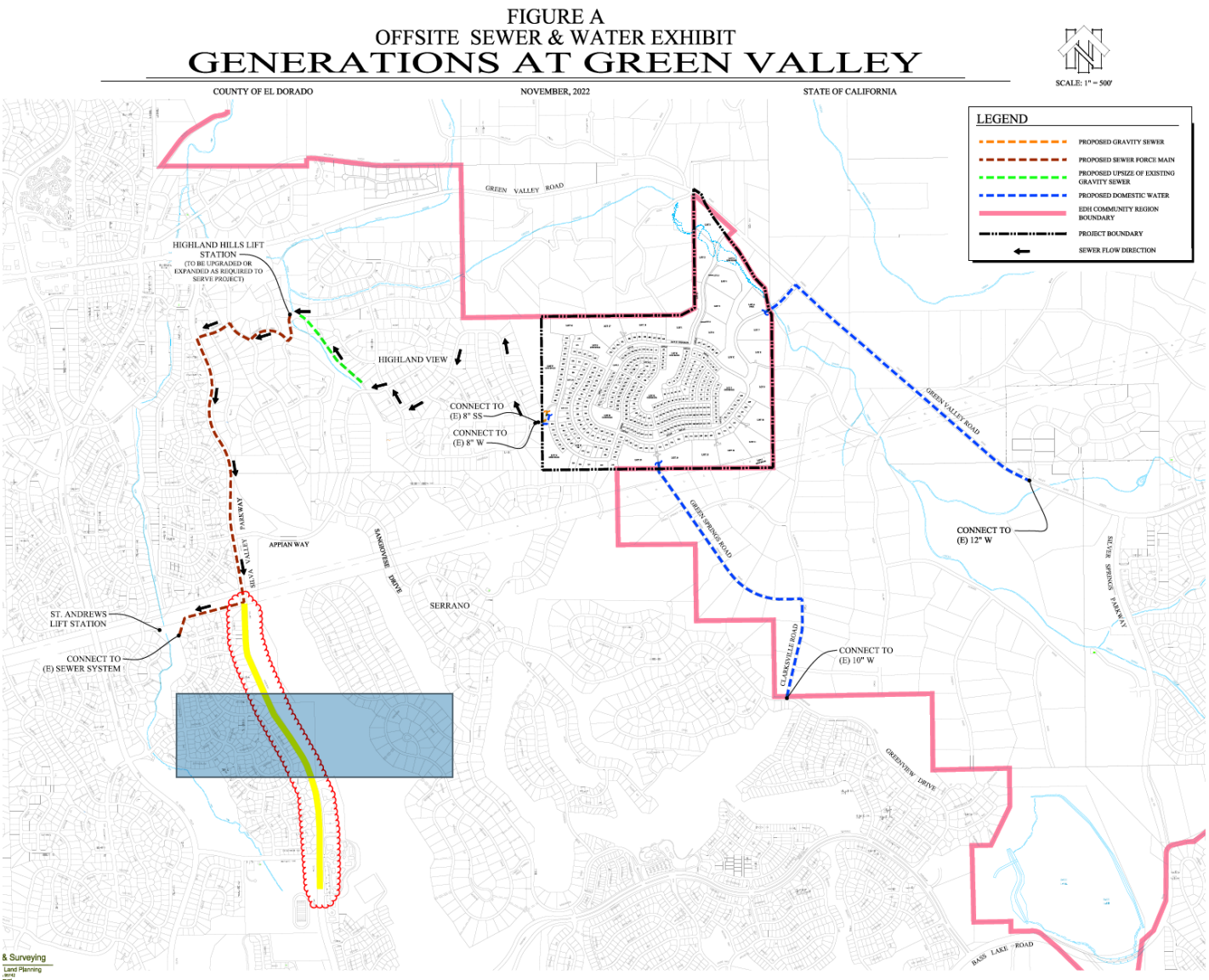



Onsite Fuel Modification Plan



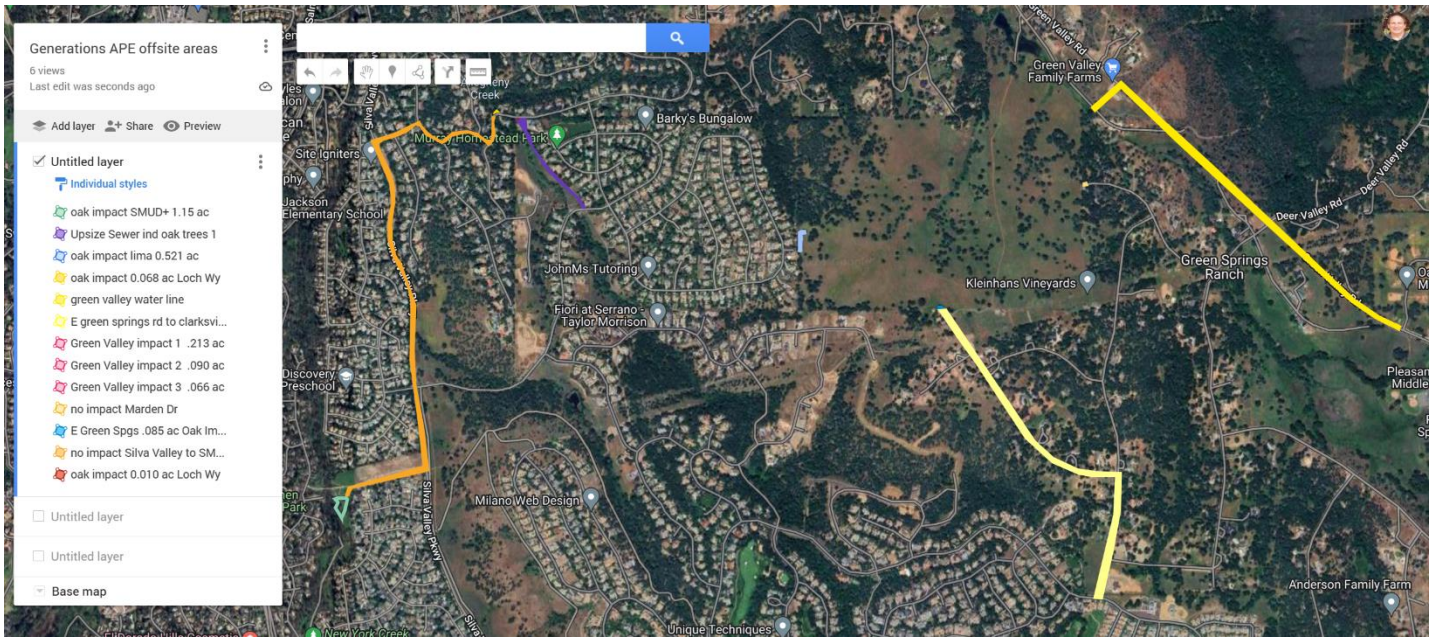

Fuel Modification Plan Legend

**Appendix B – Off-Site Images**




Area map used to inspect oak woodland impacts on off-site areas

Off-site Areas Aerial Images Overview, and Enlarged Areas:

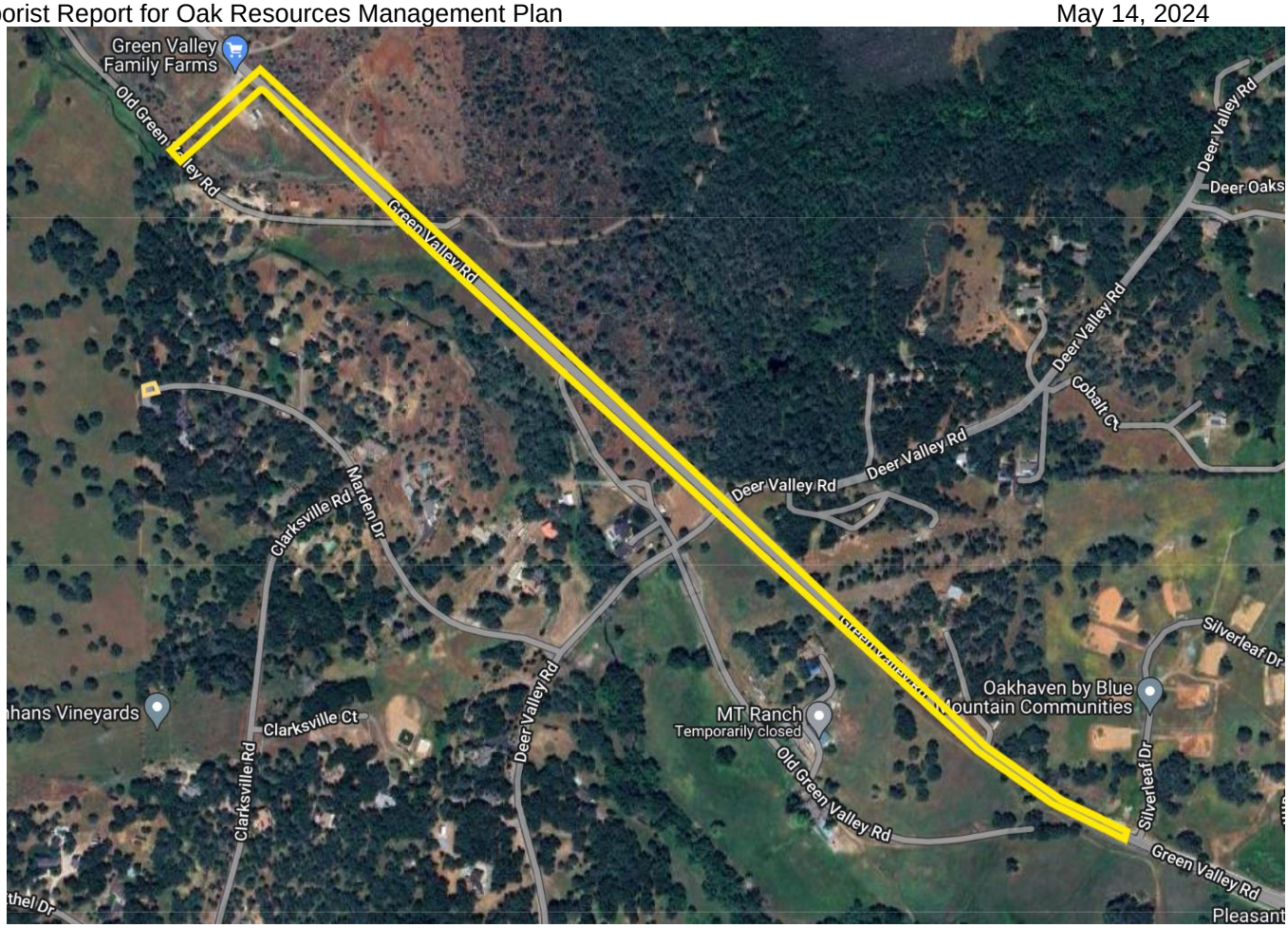




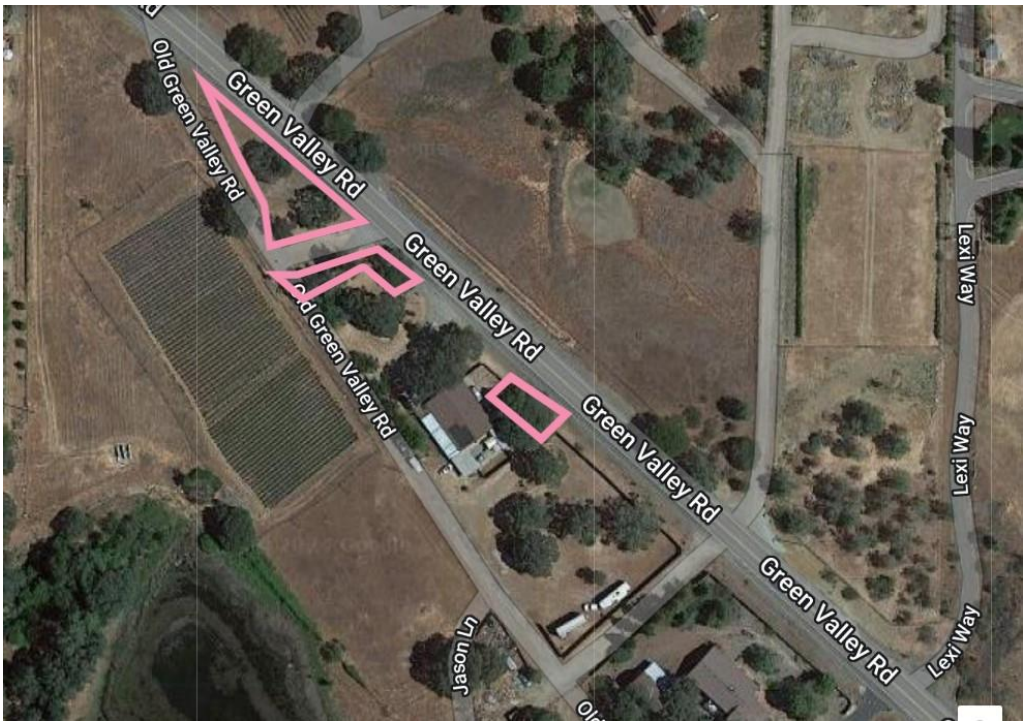

E Green Springs Rd Overview




E Green Springs Road and Oak Woodland area




Green Valley Rd Overview




Green Valley Rd enlarged




W. Glenmore Way to Loch Way enlarged




Marden Drive enlarged




Loch Way enlarged




Heritage Tree 208



Heritage Tree 208



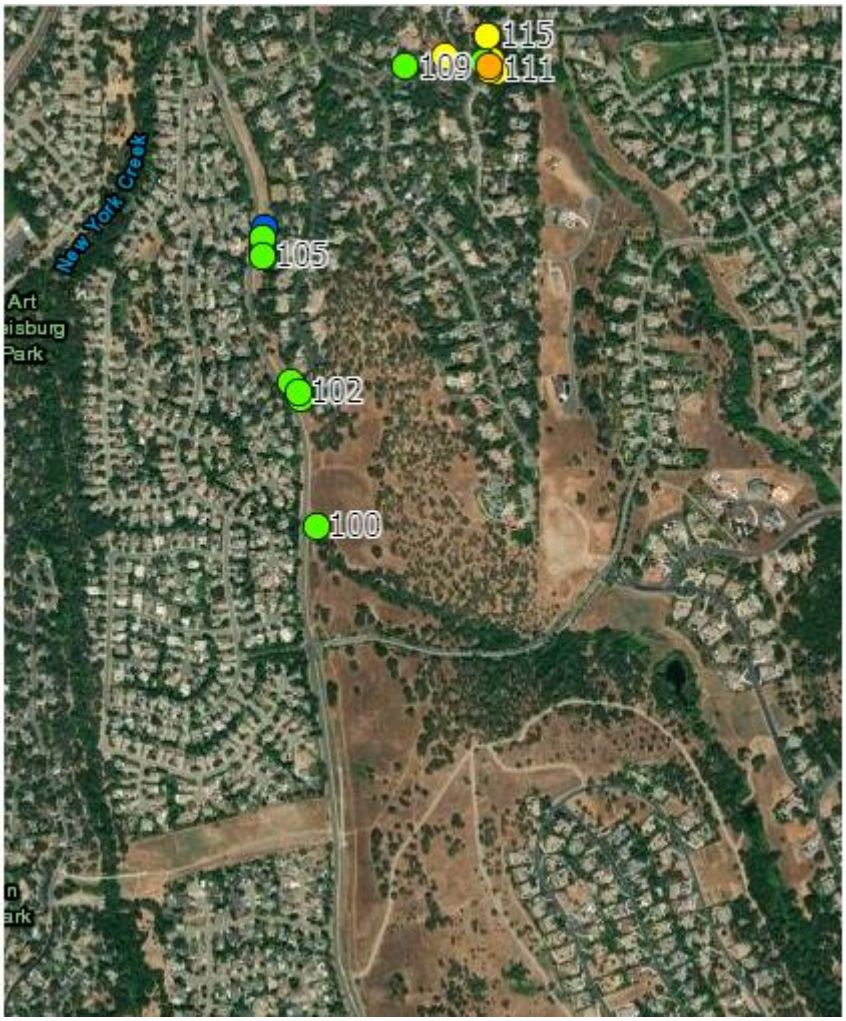

Lima Wy enlarged, no Heritage Trees or Individual oak trees



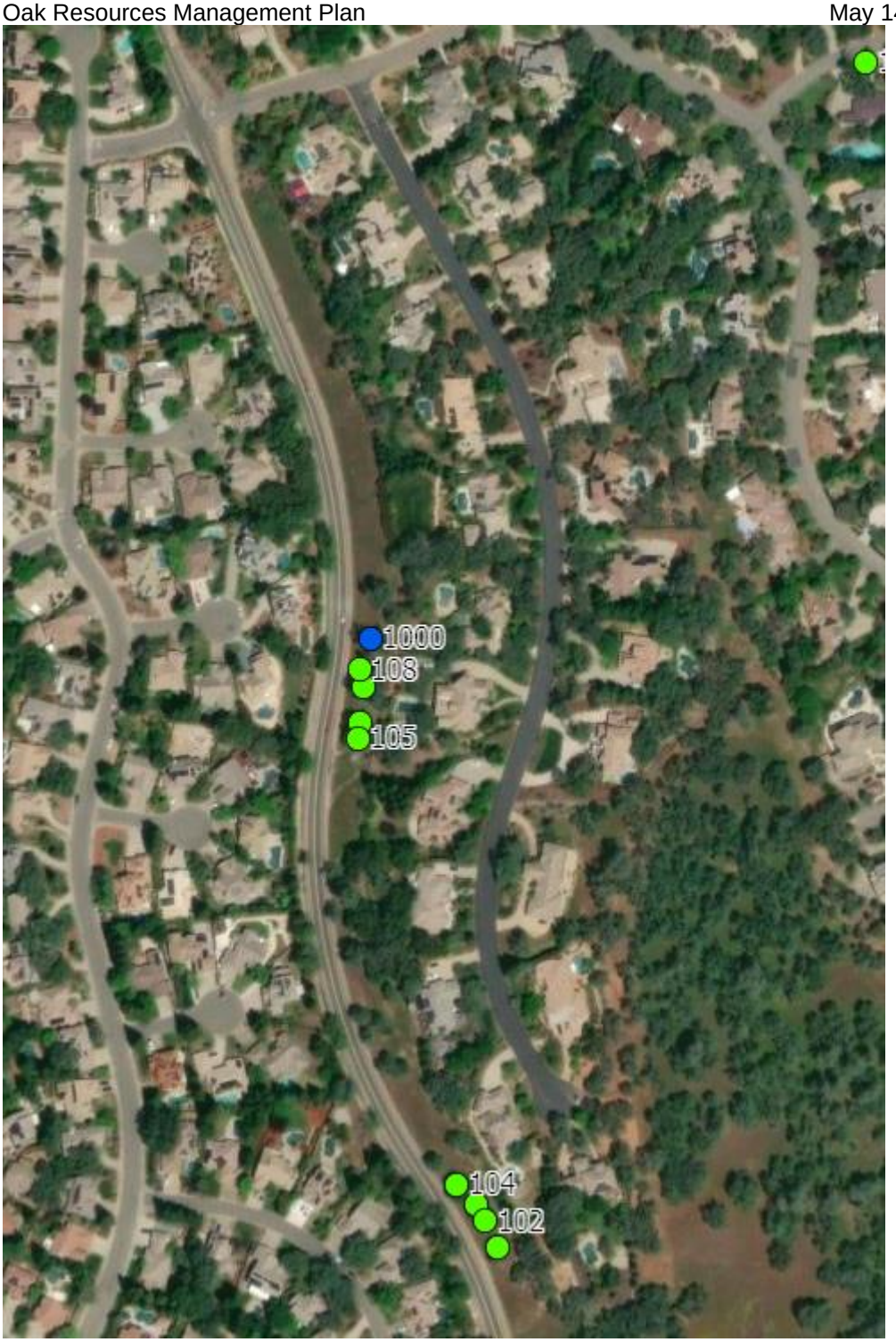

Highland Hills Lift Station, no Heritage Trees or Individual oak trees




Loch Way at Highland View impact 0.414 acres




Silva Valley Parkway; Trees along east side of Parkway far enough away from construction to avoid impact




Silva Valley Parkway enlarged; Trees along east side of Parkway far enough away from construction to avoid impact

**Appendix C – Onsite and Off-Site Tree Lists for Proposed Removals and Mitigation**

HERITAGE OAKS TO BE REMOVED

| Tree # | Species | DBH | Condition | Mitigation Inches |
|---|---|---|---|---|
| 3246 | Int live oak | 41.2 | 3 Fair | 41 |
| 3426 | Int live oak | 68.6 | 3 Fair | 69 |
| 3491 | Blue oak | 42 | 3 Fair | 42 |
| 3520 | Blue oak | 41 | 3 Fair | 41 |
| 3530 | Blue oak | 37 | 3 Fair | 37 |
| 3532 | Blue oak | 47 | 3 Fair | 47 |
| 3633 | Int live oak | 37 | 3 Fair | 37 |
| 3634 | Blue oak | 37 | 3 Fair | 37 |
| 4743 | Int live oak | 46 | 3 Fair | 46 |
| 5894 | Int live oak | 36.4 | 3 Fair | 36 |
| 345901 | Int live oak | 50.3 | 3 Fair | 50 |
| Totals | 11 trees | | Dia Inches: | 483 |

INDIVIDUAL OAKS TO BE REMOVED

| Tree # | Species | DBH | Condition | Mitigation Inches |
|---|---|---|---|---|
| 1001 | Blue Oak | 16 | 3 Fair | 16 |
| 1002 | Blue Oak | 10 | 3 Fair | 10 |
| 1003 | Blue Oak | 6 | 3 Fair | 6 |
| 1004 | Blue Oak | 6 | 3 Fair | 6 |
| 1006 | Coast live oak | 6 | 3 Fair | 6 |
| 3376 | Blue oak | 35.8 | 3 Fair | 36 |
| 3377 | Blue oak | 27.9 | 3 Fair | 28 |
| 3410 | Blue oak | 24 | 3 Fair | 24 |
| 3523 | Blue oak | 22 | 3 Fair | 22 |
| 3524 | Blue oak | 33 | 3 Fair | 33 |
| 3528 | Blue oak | 28 | 3 Fair | 28 |
| 3529 | Blue oak | 33 | 3 Fair | 33 |
| 3531 | Blue oak | 33 | 3 Fair | 33 |
| 3533 | Blue oak | 27 | 3 Fair | 27 |
| 3534 | Blue oak | 22 | 3 Fair | 22 |
| 3708 | Blue oak | 26.9 | 3 Fair | 27 |
| 3709 | Int live oak | 34 | 3 Fair | 34 |
| 4713 | Blue oak | 30.5 | 3 Fair | 31 |
| 4714 | Blue oak | 27.5 | 3 Fair | 28 |
| 4715 | Blue oak | 28 | 3 Fair | 28 |
| 4740 | Blue oak | 26 | 3 Fair | 26 |
| 9817 | Blue oak | 20.2 | 3 Fair | 20 |
| 9819 | Blue oak | 22.6 | 3 Fair | 23 |
| 341501 | Blue oak | 31.4 | 3 Fair | 31 |
| 346801 | Blue oak | 21.6 | 3 Fair | 22 |
| 3401A | Blue oak | 18 | 3 Fair | 18 |
| Totals | 26 trees | | Dia Inches | 618 |

Generations Off-Site Individual Trees and Heritage Trees

Tree List

| Tree # / Area Location | Common Name | Diameter (inches) | Condition | Mitigation Inches | |
|---|---|---|---|---|---|
| N side Green Valley Rd | Blue Oak | 19 | Fair | 19 | |
| Green Springs Rd #999 | Interior Live Oak | 20 | Fair | 20 | |
| Total Off-site Individual Oak trees | | | | | 39 |
| | | | | | |
| 208/N side of Green Valley Rd | Blue Oak | 47 | | | |
| 7137/N side of Green Valley Rd | Blue Oak | 42 | | | |
| Total Off-Site Heritage Trees | | | | | 89 |

## Appendix D
## General Tree Protection

The edge of the tree canopy outside of the construction area shall be fenced off with construction fencing, either temporary orange fence or chain link fence. The fence shall be placed as far from the trees as possible, targeting outside the dripline. If the fence cannot be placed outside of the dripline, the project arborist shall determine if the distance is acceptable or some other soil protection is necessary. A certified arborist must approve the placement of the tree fence. The fence will be marked with weather appropriate signage clearly stating the area as “Protected! Do not enter! Tree preservation zone.” Sign(s) will be placed on every face or direction of fence line.

When excavating or trenching adjacent to trees, roots 2 inches and greater encountered in the trench shall be cleanly severed at the trench side closest to the tree, and then excavated, so the roots are not torn back towards the tree. Cut exposed roots ends or exposed roots shall be covered with moist soil or moist burlap and kept moist until the soil is backfilled.

No storage of supplies or materials, parking, or other construction activity shall occur within the fenced area. If a construction activity is required within the construction area, specific specifications and mitigation shall be written to cover the work, and the fencing may be entered during the necessary construction activity, then the fencing shall be replaced after the activity is completed for the day.

The construction protection shall remain in place until the project is completed, including landscape activities. Landscape activities shall have specifications that protect the trees during the landscape activities.

Any bare soil around protected trees should be covered with a 4-inch layer of mulch consisting of ground-up tree parts.

If the protected trees appear to show signs of yellowing leaves, dead leaves, or other abnormal appearance, contact the project arborist for inspection and mitigation.

Appendix E
Long Term Landscape Maintenance Plan and Specifications

General
This section is intended to promote the optimum landscape growth and lifespan. Individual tree planting in specific sites in are intended to provide a large shade canopy and attractive landscapes over time. The border and natural screening plantings are sometimes overplanted and intended to fill the space initially, and have the weaker trees or shrubs removed over time, to create the space and site resources necessary for the remaining trees and shrubs.

These trees shall be pruned to establish a dominant leader, to provide the best structure by managing size relationships between parent and subordinate trunk and branches, and to encourage growth into a large shade canopy. These trees shall not be topped or rounded over. Trees may have competing leaders headed back to promote the strong central leader necessary to eliminate co-dominant stems and weak branching.

Design Intent
The trees planted around the perimeter of lots and alongside the sidewalk or street are intended to increase the appearance of natural areas and to screen the project and adjacent properties.

Pruning Small Trees
Branches are to be pruned by either reduction, thinning, or raising cuts to achieve the appropriate clearance over the area. The smallest diameter branches should be removed, working from the branch tips towards the center, removing none to minimal interior foliage inside the final outward branch cut. Trees shall be cleaned to remove dead branches, weakly attached branches, and branches where significant damage has occurred by rubbing, animals, insects, or critical disease. All pruning cuts shall be made in accordance with American National Standards Institute (ANSI) A300 Part 1 Pruning Standards and International Society of Arboriculture (ISA) Best Management Practices for Pruning.

On trees up to six inches in diameter, all dead branches greater than one-half inch diameter shall be removed. All weakly attached branches and potential co-dominant branches shall either be reduced by at least 20% or be removed, as most appropriate for the long term structure of the tree. The weakest or most damaged branch of a pair or group of rubbing branches shall be shortened to avoid rubbing, or removed. All temporary branches along the trunk should be retained and shortened to obtain necessary clearance. When either temporary branches exceed one-inch diameter, or the trunk forms mature bark, the temporary branches should be removed.

Stakes shall be installed as necessary to support a straight growing tree, and reduce crooked growth caused by high wind. The trunk shall be supported at the lowest point to keep the crown supported straight, and the portions of the stake above the tie point cut off to avoid rubbing branches. After the tree becomes firmly rooted, and the stake is no longer necessary to support the tree, the stakes shall be removed.

Depending on the location and site needs, clearance should be performed by pruning the smallest branches inward from the branch tips until the permanent branches are in place. Clearance minimums should be set, for example: 7.5’ over sidewalks, 10 feet over parking spaces, and 15 feet over truck traffic streets. Clearance pruning shall be carefully performed until the permanent branches are identified. Up to 25% of the total foliage on any tree should be the maximum removed during any planned pruning cycle. Follow-up pruning for structure or clearance on young trees can be performed at any time if pruning small amounts of foliage (up to 10%) and retaining the central leader and branch size relationships.

Pruning Large Trees
Branches are to be pruned by either reduction, thinning, or raising cuts to achieve the appropriate clearance over the area. The smallest diameter branches should be removed, working from the branch tips towards the center, removing none to minimal interior foliage inside the final outward branch cut. Trees shall be cleaned to remove dead branches, weakly attached branches, and branches where significant damage has occurred by rubbing, animals, insects, or critical disease. All pruning cuts shall be made in accordance with American National Standards Institute (ANSI) A300 Part 1 Pruning Standards and International Society of Arboriculture (ISA) Best Management Practices for Pruning.

On trees larger than six inches in diameter, all dead branches greater than one-inch diameter shall be removed. Long heavy branches that are either growing flat or bending down shall have approximately 15% of the end weight reduced, accomplished by a combination of pruning the downward growing branches, shortening long tips, and thinning end

weights. If any structural issues are observed by the climber working in the tree, they shall notify the property manager immediately to discuss the tree's needs.

Depending on the location and site needs, clearance should be performed by pruning the smallest branches inward from the branch tips until the permanent branches are in place. Clearance minimums should be set, for example: 7.5' over sidewalks, 10 feet over parking spaces, and 14.5 feet over streets where trash pick up occurs. Clearance pruning shall be carefully performed until the permanent branches are identified. Only as much live foliage as necessary to accomplish the objective should be removed. Up to 25% of the total foliage on any tree should be the maximum removed during any planned pruning cycle.

Any special site issues for utility clearance or conflicts with other objects shall be managed by early pruning to direct growth away from the target lines, overhead lights, flags, or buildings.

Thinning of Dense Planting

Many landscape plantings and natural landscape areas are over-planted by installing a greater number of plants at closer spacing than optimum for the full-sized plants. Over time, plants will grow into each other, the crowns will conflict, and the spacing will need to be corrected. Correct spacing is obtained by removing the least desirable plants to meet the final spacing target, within reasonable tolerances.

If conflicting plants are all healthy, it won't matter which plants are removed to achieve the spacing distances. Spaced thinning should be performed before the foliar crowns are intertwined or overlapping. The thinning may be performed over two or three cycles as the trees grow over time, depending on the density and desired final spacing.

## Appendix F

## Avoiding Tree Damage During Construction

Edited from the ISA's tree protection guidelines

As cities and suburbs expand, wooded lands are being developed into commercial and residential sites. Homes are constructed in the midst of trees to take advantage of the aesthetic and environmental value of the wooded lots. Wooded properties can be worth as much as 20 percent more than those without trees, and people value the opportunity to live among trees.

Unfortunately, the processes involved with construction can be deadly to nearby trees. Unless the damage is extreme, the trees may not die immediately but could decline over several years. With this delay in symptom development, you may not associate the loss of the tree with the construction.

It is possible to preserve trees on building sites if the right measures are taken. The most important step is to hire a professional arborist during the planning stage. An arborist can help you decide which trees can be saved and can work with the builder to protect the trees throughout each construction phase.

How Trees Are Damaged During Construction

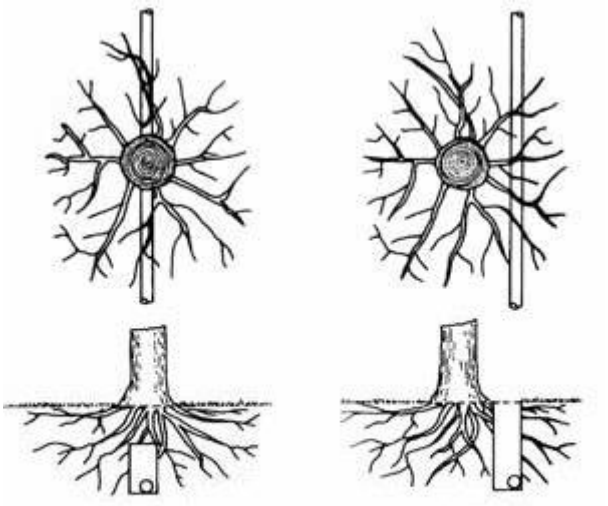
**Physical Injury to Trunk and Crown.** Construction equipment can injure the aboveground portion of a tree by breaking branches, tearing the bark, and wounding the trunk. These injuries are permanent and, if extensive, can be fatal.

**Cutting of Roots.** The digging and trenching that are necessary to construct a house and install underground utilities will likely sever a portion of the roots of many trees in the area. It is easy to appreciate the potential for damage if you understand where roots grow. The roots of a tree are found mostly in the upper 6 to 24 inches of the soil. In a mature tree, the roots extend far from the trunk. In fact, roots typically are found growing a distance of one to three times the height of the tree. The amount of damage a tree can suffer from root loss depends, in part, on how close to the tree the cut is made. Severing one major root can cause the loss of 5 to 20 percent of the root system.



The roots of a tree extend far from the trunk and are found mostly in the upper 6 to 12 inches of soil.

Another problem that may result from root loss caused by digging and trenching is that the potential for the trees to fall over is increased. The roots play a critical role in anchoring a tree. If the major support roots are cut on one side of a tree, the tree may fall or blow over.



Less damage is done to tree roots if utilities are tunneled under a tree (right, top and bottom) rather than across the roots (left, top and bottom).

Less damage is done to tree roots if utilities are tunneled under a tree rather than across the roots.

**Soil Compaction.** An ideal soil for root growth and development is about 50 percent pore space. These pores—the spaces between soil particles—are filled with water and air. The heavy equipment used in construction compacts the soil and can dramatically reduce the amount of pore space. This compaction not only inhibits root growth and penetration but also decreases oxygen in the soil that is essential to the growth and function of the roots, and water infiltration.

**Smothering Roots by Adding Soil.** Most people are surprised to learn that 90 percent of the fine roots that absorb water and minerals are in the upper 6 to 12 inches of soil. Roots require space, air, and water. Roots grow best where these requirements are met, which is usually near the soil surface. Piling soil over the root system or increasing the grade smothers the roots. It takes only a few inches of added soil to kill a sensitive mature tree.

**Exposure to the Elements.** Trees in a forest grow as a community, protecting each other from the elements. The trees grow tall, with long, straight trunks and high canopies. Removing neighboring trees or opening the shared canopies of trees during construction exposes the remaining trees to sunlight and wind. The higher levels of sunlight may cause sunscald on the trunks and branches. Also, the remaining trees are more prone to breaking from wind or ice loading.

Getting Advice

Hire a professional arborist in the early planning stage. Many of the trees on your property may be saved if the proper steps are taken. Allow the arborist to meet with you and your building contractor. Your arborist can assess the trees on your property, determine which are healthy and structurally sound, and suggest measures to preserve and protect them.

One of the first decisions is determining which trees are to be preserved and which should be removed. You must consider the species, size, maturity, location, and condition of each tree. The largest, most mature trees are not always the best choices to preserve. Younger, more vigorous trees usually can survive and adapt to the stresses of construction better. Try to maintain diversity of species and ages. Your arborist can advise you about which trees are more sensitive to compaction, grade changes, and root damage.

Planning

Your arborist and builder should work together in planning the construction. The builder may need to be educated regarding the value of the trees on your property and the importance of saving them. Few builders are aware of the way trees' roots grow and what must be done to protect them.

Sometimes small changes in the placement or design of your house can make a great difference in whether a critical tree will survive. An alternative plan may be more friendly to the root system. For example, bridging over the roots may substitute for a conventional walkway. Because trenching near a tree for utility installation can be damaging, tunneling under the root system may be a good option.

Erecting Barriers

Because our ability to repair construction damage to trees is limited, it is vital that trees be protected from injury. The single most important action you can take is to set up construction fences around all of the trees that are to remain. The fences should be placed as far out from the trunks of the trees as possible. As a general guideline, allow 1 foot of space from the trunk for each inch of trunk diameter. The intent is not merely to protect the aboveground portions of the trees but also the root systems. Remember that the root systems extend much farther than the drip lines of the trees.

Instruct construction personnel to keep the fenced area clear of building materials, waste, excess soil, and equipment. No digging, trenching, or other soil disturbance such as driving vehicles and equipment over the soil should be allowed in the fenced area.

Protective fences should be erected as far out from the trunks as possible in order to protect the root system prior to the commencement of any site work, including grading, demolition, and grubbing.

Limiting Access

If at all possible, it is best to allow only one access route on and off the property. All contractors must be instructed where they are permitted to drive and park their vehicles. The construction access drive should be the route for utility wires; underground water, sewer, or storm drain lines; roadways; or the driveway.




**Protective fences should be erected as far out from the trunks as possible in order to protect the root systems.**

Specify storage areas for equipment, soil, and construction materials. Limit areas for burning (if permitted), cement wash-out pits, and construction work zones. These areas should be away from protected trees.

Specifications

Specifications are to be put in writing. All of the measures intended to protect your trees must be written into the construction specifications. The written specifications should detail exactly what can and cannot be done to and around the trees. Each subcontractor must be made aware of the barriers, limitations, and specified work zones. It is a good idea to post signs as a reminder.

Fines and penalties for violations should be built into the specifications. Not too surprisingly, subcontractors are much more likely to adhere to the tree preservation clauses if their profit is at stake. The severity of the fines should be proportional to the potential damage to the trees and should increase for multiple infractions.

Maintaining Good Communications

It is important to work together as a team. You may share clear objectives with your arborist and your builder, but one subcontractor can destroy your prudent efforts. Construction damage to trees is often irreversible.

Visit the site at least once a day if possible. Your vigilance will pay off as workers learn to take your wishes seriously. Take photos at every stage of construction. If any infraction of the specifications does occur, it will be important to prove liability.

Final Stages

It is not unusual to go to great lengths to preserve trees during construction, only to have them injured during landscaping. Installing irrigation systems and roto-tilling planting beds are two ways the root systems of trees can be damaged. Remember also that small increases in grade (as little as 2 to 6 inches) that place additional soil over the roots can be devastating to your trees. ANSI A300 Standards Part 5 states that tree protection shall be in place for the landscape phase of the site development. Landscape tree protection may be different than other construction process tree protection, and a conference with the landscape contractor should be held prior to the commencement of the landscape work. Careful planning and communicating with landscape designers and contractors is just as important as avoiding tree damage during construction.

Post-Construction Tree Maintenance

Your trees may require several years to adjust to the injury and environmental changes that occur during construction. The better construction impacts are avoided, the less construction stress the trees will experience. Stressed trees are more prone to health problems such as disease and insect infestations. Talk to your arborist about continued maintenance for your trees. Continue to monitor your trees, and have them periodically evaluated for declining health or safety hazards.

Despite the best intentions and most stringent tree preservation measures, your trees still might be injured from the construction process. Your arborist can suggest remedial treatments to help reduce stress and improve the growing conditions around your trees. In addition, the International Society of Arboriculture offers a companion to this brochure titled “Treatment of Trees Damaged by Construction”.

## Appendix G
## Tree Planting Specifications

Trees shall be free of major injury such as scrapes that remove greater than 20% of the bark circumference, a broken central leader, or constrictions from staking or support. The graft, if present, shall be consistent for the production of the cultivar or species. The trunk flare shall be at grade, not buried by soil, and adventitious roots shall not be growing from above the trunk flare.

The tree shall not be root bound in the container, and the trunk diameter relative to the container sizes, within the limits of American National Standards Institute (ANSI) Z-60 Nursery Standards.

Prior to acceptance, upon delivery, trees may be pulled from the container, so the rootball can be inspected for compliance with the specifications. An agreed upon maximum percent of trees may be checked for compliance. The nursery should provide post delivery care specifications to keep the trees in optimum condition until planting.

Tree Planting

**1.0 INSPECT THE TREE**

1.1 Carefully remove the soil at the top of the container to locate the trunk flare. Check for girdling roots and damage to the root system and lower trunk.

1.2 Until a relationship is established with the supplying nursery, randomly select an acceptable sample for the delivery. Inspect the root system by taking the rootball out of the container, and remove all the soil from the root system. Inspect the inner roots to verify that the roots were properly pruned when moved from the initial container to the next

larger size. Keep the root system moist during the check. If the roots were properly pruned during container transfer, and the roots have been kept moist, the tree can be planted as a bare root tree.
1.3 If the trees are acceptable, each tree shall be removed from the container prior to digging the hole, and the depth of the rootball from the trunk flare to the bottom of the rootball shall be measured. This measurement, less 1" is the depth the pedestal in the center of the planting hole shall be excavated to.

## 2.0 DIG THE HOLE
2.1 Shave and discard grass and weeds from the planting site.
2.2 The hole should be a minimum 3 times the diameter of the container diameter.
2.2.1 Square containers shall be dug with a circular hole 3 times the container measurement.
2.3 Dig the hole, leaving an undisturbed pedestal in the center that the root ball will be set on.
2.4 The pedestal shall be excavated to the depth measurement determined above

## 3.0 ROOT BALL PREPARATION
3.1 Loosen and straighten outside and bottom roots prior to placing the rootball on the pedestal. The trunk flare (the point where the trunk meets the roots) should be 1" above ground level.
3.2 Winding and girdling roots shall be pruned to either the point they are perpendicular to the root ball, or a point where they can be straightened and placed perpendicular to the rootball.
3.3 Keep the roots moist during this process so they do not dry out.

## 4.0 BACKFILL
4.1 Hold the tree so the trunk and central leader are in a straight upright position.
4.2 Backfill soil with the soil you removed around the base of the pedestal and rootball no higher than 2/3, so the tree stands in the upright position
4.3 Tamp the soil to remove air gaps, or fill with water and allow soil to settle and drain. Continue to fill the entire hole with existing soil in layers and tamping, up to finished grade. Backfill soil shall not be placed on top of the rootball.
4.4 Build a berm at the outside edge of the rootball. The berm shall be a minimum 3 inches high and wide.
4.5 Cover the remainder of the backfill soil outside the berm with a set level of mulch (2 to 4 inches deep).

## 5.0 STAKING
5.1 Remove the nursery stake (the thin stake tied to the trunk) that is secured to the tree.
5.2 Install the appropriate number of stakes – for example, two stakes on the windward and leeward side of the tree, set at least 2 feet into the native soil outside the rootball.
5.2.1If the area is exceptionally windy, high traffic, or when specified, install 3 or 4 stakes spaced evenly around the circumference, outside the rootball.
5.3 One tie per stake shall be placed at the lowest point on the trunk where the tree crown stands upright. Ties shall be placed using a "figure 8" crossing pattern wrapped around the trunk and firmly tied or attached to the stake.
5.3.1 Ties shall be loose enough so the tree crown moves up to 3 times the trunk diameter in the wind, and taut enough that the trunk does not rub the stakes during movement.
5.4 The stakes shall be cut off above the tie point so branches do not rub the stake above the tie point.
5.5 Check the stakes and ties periodically, removing them when the tree is able to stand on its own.
5.6 If a leader that should be vertical is drooping, the leader may be temporarily straightened using a bamboo or small diameter wood splint approximately 25% longer than the drooping section of stem, tied to the stem at the top and bottom of the splint to hold the stem vertical. The splint shall be removed prior to girdling or constricting the stem, and may be re-installed as necessary.

## 6.0 MULCH
6.1 Apply a set depth (2 to 4 inches) of wood chips or other organic mulch over the planting hole excavated soil.
6.2 Mulch may be placed inside the berm and shall be kept at least 4" away from the trunk flare.
6.3 The soil area of the planting hole shall be kept clear of grass and landscape plantings.

## 7.0 WATER/IRRIGATION
7.1 Apply water using a low pressure application, i.e.: trickle from a hose, soaker hose, or bubbler.
7.2 Use low water volume to apply the water. Add water long enough to saturate the rootball and planting area.
7.2.1 Lawn sprinklers shall not be considered an acceptable method of applying irrigation to newly planted trees.
7.3 The initial watering frequency shall be checked by monitoring the soil moisture. Based on the temperature and humidity, learn how long the soil retains the moisture.

7.4 After the soil is below field capacity, and before it dries out, repeat the watering process, every so determined days.
7.4.1 As the weather and seasons change, the irrigation frequency may change. This will be evaluated by checking soil moisture following water application.
7.4.1.1 For example: you may learn irrigation should be applied twice a week during the fall, except in cool or rainy weather. Irrigation may need to be applied every two days during hot dry summer periods.
7.5 Irrigation shall be continued for the first three years after planting.
7.5.1 Avoiding drying out the rootball and adjacent soil is critcal for tree growth and establishment.

## 8.0 PROTECT THE TRUNK

8.1 Avoid damage from mowers and string trimmers to the tender bark of the young tree.
8.2 Maintain a clear area free of vegetation around the trunk in the berm or basin area.
8.3 Keep the set depth of mulch (2 to 4 inches) coverage of the area around the tree.
8.4 Retain temporary low branches along the trunk to shade and feed the trunk.

### 9.0 PRUNING NEWLY PLANTED TREES

9.1 Broken and dead branches shall be pruned.
9.2 A central leader shall be identified and retained if present. If co-dominant leaders are present, they shall be pruned to be shorter than the central leader by 20%.
9.3 All low temporary branches on the lower trunk shall be retained, and if needed shortened for clearance.



Detail for #1, #5 and #15 container planting stock

10. **FUTURE CARE**

10.1 During subsequent years, the berm should be enlarged or removed to in order to provide water to the increasing root growth. The watering area should target new root growth and projected root growth.
10.2 Pruning should retain a dominant central leader; and retain low temporary branches until trunk bark hardens or remove before branch diameter becomes too large.

Appendix F1

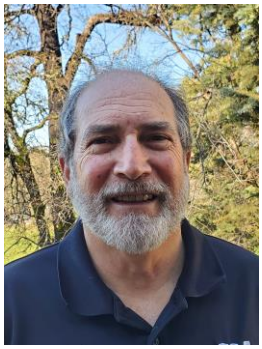
Nursery Stock and Tree Planting

Nursery Stock purchase

Trees purchased for the subject project shall be the Genus, species, and cultivar specified in the purchase documents. Trees shall be grown to be free of bound root systems caused by winding roots or kinked roots from a previous smaller container. As trees are moved to larger containers, circling roots shall be either pruned to a point where they can grow straight, straightened in the new container, or removed. Kinked roots shall be pruned to a point where they will grow straight outward or downward.

The trunk and branches shall be of a structure where a central leader is defined, or the central leader can be easily selected. The competing leaders have a smaller diameter, and can be pruned shorter.

# California Tree and Landscape Consulting, Inc.



## GORDON MANN

EDUCATION AND QUALIFICATIONS

| | |
|---|---|
| 1977 | Bachelor of Science, Forestry, University of Illinois, Champaign. |
| 1982 - 1985 | Horticulture Courses, College of San Mateo, San Mateo. |
| 1984 | Certified as an Arborist, WE-0151A, by the International Society of Arboriculture (ISA). |
| 2004 | Certified as a Municipal Specialist, WE-0151AM, by the ISA. |
| 2011 | Registered Consulting Arborist, #480, by the American Society of Consulting Arborists (ASCA). |
| 2003 | Graduate of the ASCA Consulting Academy. |
| 2006 | Certified as an Urban Forester, #127, by the California Urban Forests Council (CaUFC). |
| 2011 | TRACE Tree Risk Assessment Certified, continued as an ISA Qualified Tree Risk Assessor (T.R.A.Q.). |

PROFESSIONAL EXPERIENCE

2016 – Present CALIFORNIA TREE AND LANDSCAPE CONSULTING, INC (CalTLC). President and Consulting Arborist.
Auburn. Mr. Mann provides consultation to private and public clients in health and structure analysis, inventories, management planning for the care of trees, tree appraisal, risk assessment and management, and urban forest management plans.

1986 - Present MANN MADE RESOURCES. Owner and Consulting Arborist. Auburn.
Mr. Mann provides consultation in municipal tree and risk management, public administration, and developing and marketing tree conservation products.

2015 – 2017 CITY OF RANCHO CORDOVA, CA. Contract City Arborist.
Mr. Mann serves as the City's first arborist, developing the tree planting and tree maintenance programs, performing tree inspections, updating ordinances, providing public education, and creating a management plan,

1984 – 2007 CITY OF REDWOOD CITY, CA. City Arborist, Arborist, and Public Works Superintendent.
Mr. Mann developed the Tree Preservation and Sidewalk Repair Program, supervised and managed the tree maintenance program, performed inspections and administered the Tree Preservation Ordinance. Additionally, he oversaw the following Public Works programs: Streets, Sidewalk, Traffic Signals and Streetlights, Parking Meters, Signs and Markings, and Trees.

1982 – 1984 CITY OF SAN MATEO, CA. Tree Maintenance Supervisor.
For the City of San Mateo, Mr. Mann provided supervision and management of the tree maintenance program, and inspection and administration of the Heritage Tree Ordinance.

1977 – 1982 VILLAGE OF BROOKFIELD, IL. Village Forester.
Mr. Mann provided inspection of tree contractors, tree inspections, managed the response to Dutch Elm Disease. He developed an in-house urban forestry program with leadworker, supervision, and management duties to complement the contract program.

1979 - Present INTERNATIONAL SOCIETY OF ARBORICULTURE. Member.

- Board of Directors (2015 - Present)

- True Professional of Arboriculture Award (2011); In recognition of material and substantial contribution to the progress of arboriculture and having given unselfishly to support arboriculture.

1982 - Present WESTERN CHAPTER ISA (WCISA). Member.

- Chairman of the Student Committee (2014 - 2017)
- Member of the Certification Committee (2007 - Present)
- Chairman of the Municipal Committee (2009 - 2014) • Award of Merit (2016) In recognition of outstanding meritorious service in advancing the principles, ideals and practices of arboriculture.
- Annual Conference Chair (2012)
- Certification Proctor (2010 – Present)
- President (1992 - 1993)
- Award of Achievement and President's Award (1990)

1985 - Present CALIFORNIA URBAN FORESTS COUNCIL (CaUFC). Member; Board Member (2010 - Present)

1985 - Present SOCIETY OF MUNICIPAL ARBORISTS (SMA). Member. e Legacy Project of the Year (2015) o In recognition of outstanding meritorious service in advancing the principles, ideals and practices of arboriculture.

- Board Member (2005 - 2007)

2001 - Present AMERICAN SOCIETY OF CONSULTING ARBORISTS.
Member. e Board of Directors (2006 - 2013)
• President (2012)

2001 - Present CAL FIRE. Advisory Position.
• Chairman of the California Urban Forestry Advisory Committee (2014 - 2017)

2007 – Present AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI): A300 TREE MAINTENANCE STANDARDS
COMMITTEE. SMA Representative and Alternate.

- Alternative Representative for SMA (2004 - 2007; 2012 - Present)
- Representative for SMA (2007 - 2012)

2007 - Present SACRAMENTO TREE FOUNDATION. Member and Employee.

- Co-chair/member of the Technical Advisory Committee (2012 - Present)
- Urban Forest Services Director (2007 - 2009) e Facilitator of the Regional Ordinance Committee (2007 - 2009)
- 1988 - 1994 TREE CLIMBING COMPETITION.
  - Chairman for Northern California (1988 - 1992)
  - Chairperson for International (1991 - 1994)

PUBLICA TIONS AND LECTURES

Mr. Mann has authored numerous articles in newsletters and magazines such as Western Arborist, Arborist News, City Trees, Tree Care Industry Association, Utility Arborists Association, CityTrees, and Arborists Online, covering a range of topics on Urban Forestry, Tree Care, and Tree Management. He has developed and led the training for several programs with the California Arborist Association. Additionally, Mr. Mann regularly presents at numerous professional association meetings on urban tree management topics.

# Arborist Disclosure Statement

Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatment, pruning and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

## Assumptions and Limiting Conditions

1. Consultant assumes that any legal description provided to Consultant is correct and that title to property is good and marketable. Consultant assumes no responsibility for legal matters. Consultant assumes all property appraised or evaluated is free and clear, and is under responsible ownership and competent management.
2. Consultant assumes that the property and its use do not violate applicable codes, ordinances, statutes or regulations.
3. Although Consultant has taken care to obtain all information from reliable sources and to verify the data insofar as possible, Consultant does not guarantee and is not responsible for the accuracy of information provided by others.
4. Client may not require Consultant to testify or attend court by reason of any report unless mutually satisfactory contractual arrangements are made, including payment of an additional fee for such Services as described in the Consulting Arborist Agreement.
5. Unless otherwise required by law, possession of this report does not imply right of publication or use for any purpose by any person other than the person to whom it is addressed, without the prior express written consent of the Consultant.
6. Unless otherwise required by law, no part of this report shall be conveyed by any person, including the Client, the public through advertising, public relations, news, sales or other media without the Consultant‘s prior express written consent.
7. This report and any values expressed herein represent the opinion of the Consultant, and the Consultant’s fee is in no way contingent upon the reporting of a specific value, a stipulated result, the occurrence of a subsequent event or upon any finding to be reported.
8. Sketches, drawings and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys. The reproduction of any information generated by architects, engineers or other consultants and any sketches, drawings or photographs is for the express purpose of coordination and ease of reference only. Inclusion of such information on any drawings or other documents does not constitute a representation by Consultant as to the sufficiency or accuracy of the information.
9. Unless otherwise agreed, (1) information contained in this report covers only the items examined and reflects the condition of those items at the time of inspection; and (2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing or coring. Consultant makes no warranty or guarantee, express or implied that the problems or deficiencies of the plans or property in question may not arise in the future.
10. Loss or alteration of any part of this Agreement invalidates the entire report.

## Certificate of Performance

I, Gordon Mann, certify that:

The trees were inspected by an ISA Certified Arborist. I have personally reviewed the trees and site referred to in this report and have stated my findings accurately. The extent of the inspection is stated in the attached report under Assignment;

I have no current or prospective interest in the vegetation, or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved;

The analysis, opinions and conclusions stated herein are my own and are based on current scientific procedures and facts;

My analysis, opinions, and conclusions were developed, and this report has been prepared according to commonly accepted arboricultural practices;

No one provided significant professional assistance to me, except as indicated within the report;

My compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client, or any other party, nor upon the results of the assignment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member in good standing of the International Society of Arboriculture (ISA) and an ISA Certified Arborist and Municipal Specialist. I am also a Registered Consulting Arborist member in good standing of the American Society of Consulting Arborists. I have been involved in the practice of arboriculture and the care and study of trees for over 45 years.

Signed:



Gordon Mann
Date: May 14, 2024

California Tree and Landscape Consulting, Inc.

May 7, 2024

Mr. Aidan Barry, Executive Vice President
TTLC Management, Inc
110 Blue Ravine Road, Suite 209
Folsom, CA 95630
c/o Jaren Nuzman

**SUBJECT: ARBORIST MEMO FOR SILVA VALLEY PARKWAY ALTERNATIVE SEWER ROUTING CONSTRUCTION POTENTIAL OAK IMPACT**

Dear Mr. Nuzman,

Thank you for the opportunity to provide additional Arborist Consulting Services. This memo includes the observations and assessment of the Silva Valley Parkway Oak trees growing adjacent to the proposed alternative construction for the sewer system for Generations development. The site was re-visited on April 26, 2024.

**Assignment:** The area along the east side of Silva Valley Parkway from the SMUD Corridor south to just south of Harvard Way was driven, and trees on the east side of the road near the proposed construction area were inspected. The closest trees to the proposed construction were inspected for potential impact. There is still uncertainty to the actual final design of the trench and construction. Once the final design is completed, the area will be re-assessed to determine if any oak tree impacts will occur.

**Summary:** The trees closest to the road were inspected and included on the aerial image. There were two oaks found growing in the rock drainage channel between the road and the bike path where a drain brings runoff into the channel. These were the only two protected oaks that could potentially be impacted by the sewer connection, approximately 20 inches of individual trees, depending on the final design. The other oak trees east of the bike path were all found to be growing outside of, and far enough away from, the likely construction area to avoid impact from the excavation alongside the road. Because the final design of the sewer line was not completed, the area where the final design places the sewer line will be re-assessed to determine if any oak trees are impacted.

**Observations:** The site was visited on Friday, April 26, 2024. The entire route along Silva Valley Parkway was driven. This memo covers the portion from just south of Harvard Way going north to the SMUD corridor. The trees on the east side of Silva Valley Parkway closest to the road and potential construction area were inspected. All of the trees were compared from both the dripline and diameter ratio distance from the potential trench location.

Based on the distance from the proposed sewer construction, there were only two oak trees growing in the rock drainage channel between the bike path and retaining wall and the street with a drain pipe feeding the channel south of the two trees that may be impacted by the potential construction of excavation alongside the road. Those trees ere approximately 20 inches total diameter, 12 and 8 inches. These trees were rated in Fair condition.

The trees were assessed and rated for health and structure, and overall condition considering: bud quality and density; vitality; dieback; root impacts; branch structure, branch attachment, crotch structure, trunk flare, surface roots, decay, insects and diseases, growth habit, any physical damages, lean, and other issues that affect the condition of the trees.

The rating system used for both health, structure, and overall condition is:
0 (0) Dead;
1-20 (1) Very Poor/severe decline; no corrective mitigation
21-40 (2) Poor/Declining; likely no corrective mitigation
41-60 (3) Fair; has defects that can be pruned or maintained and average vigor
61-80 (4) Good; few defects, good vigor and
81-100 (5) Excellent; excellent vigor and crown structure, no significant defects.

**Other testing or examination:** No further testing or examinations were found necessary at the time of the reinspection.

**Discussion:** With the exception of the two trees in the drainage channel, all the trees observed were found to be far enough away from the potential trench alongside the road to avoid impacts from construction. The two trees may be impacted totaling 20 diameter inches.

During approved excavation if any roots 2 inches diameter or greater are found to be growing into the trench excavation area from outside the area, root pruning will need to be performed at the edge of the construction area prior to root excavation to avoid tearing of any roots farther toward the tree. The distance from the trunk, and proper root pruning will avoid more than negligible impact to the trees.

Normal tree protection to keep equipment and soil compaction between the trench and the tree will need to be installed prior to construction or grading work.

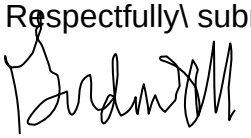
Once the final design of the sewer line is provided, the area where the final design places the sewer line will be re-assessed to determine if any oak trees will be impacted.

**Conclusion:** With the exception of the two oak trees growing in the drainage ditch, the other oak trees growing on the east side of Silva Valley Parkway from just south of Harvard Wayt north to the SMUD corridor are growing far enough away from the proposed construction area that no impact beyond negligible will occur during the construction work if proper tree protection and root pruning is performed. A final design was not available at the time of the inspection.

Once the final design of the sewer line is provided, the area where the final design places the sewer line will be re-assessed to determine if any oak trees will be impacted.

Please contact me at 650-740-3461, or gordon@mannandtrees.com, if you have any questions about this report or desire any other services for this project.

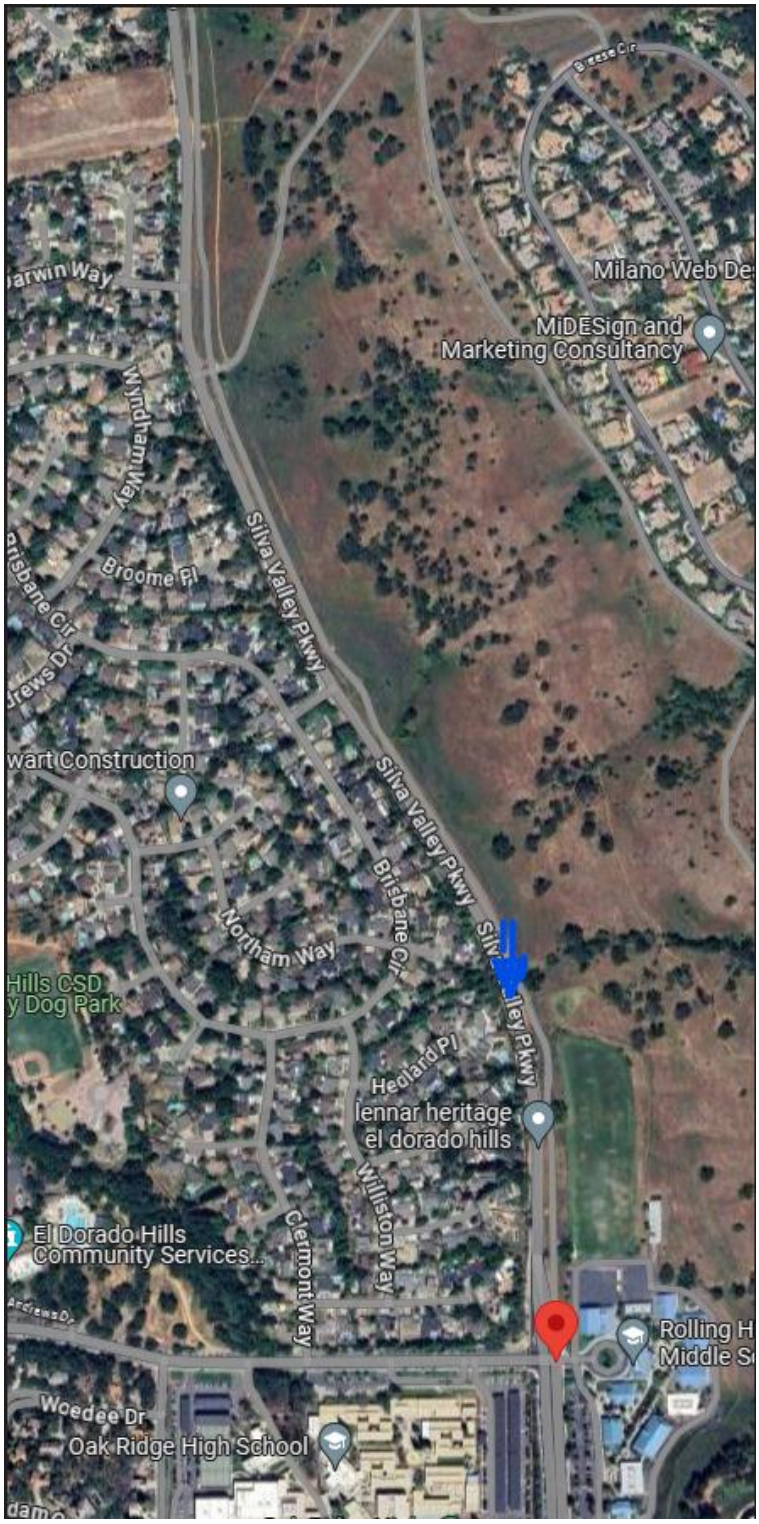
Respectfully\ submitted,



Gordon Mann
Consulting Arborist and Urban Forester
Registered Consulting Arborist #480
ISA Certified Arborist and Municipal Specialist #WE-0151AM
CaUFC Certified Urban Forester #127
ISA Qualified Tree Risk Assessor #1005
Nevada County Fire Safe Council Defensible Space Advisory Training
California Tree and Landscape Consulting, Inc.
Auburn, CA
650-740-3461
gordon@mannandtrees.com
www.caltlc.com

Attachments:
Appendix 1 Images
Assumptions and Limitations
Resume for Gordon Mann
Certificate of Performance

Appendix 1 Images




Silva Valley Parkway from just south of Harvard Way north to the SMUD corridor
The blue arrow is where the two oak trees in the drainage channel were observed.




Street view of Silva Valley Parkway showing two trees growing in the drainage channel

## Assignment Assumptions and Limiting Conditions

1. Consultant assumes that any legal description provided to Consultant is correct and that title to property is good and marketable. Consultant assumes no responsibility for legal matters. Consultant assumes all property appraised or evaluated is free and clear, and is under responsible ownership and competent management.
2. Consultant assumes that the property and its use do not violate applicable codes, ordinances, statutes or regulations.
3. Although Consultant has taken care to obtain all information from reliable sources and to verify the data insofar as possible, Consultant does not guarantee and is not responsible for the accuracy of information provided by others.
4. Client may not require Consultant to testify or attend court by reason of any report unless mutually satisfactory contractual arrangements are made, including payment of an additional fee for such Services as described in the Consulting Arborist Agreement.
5. Unless otherwise required by law, possession of this report does not imply right of publication or use for any purpose by any person other than the person to whom it is addressed, without the prior express written consent of the Consultant.
6. Unless otherwise required by law, no part of this report shall be conveyed by any person, including the Client, the public through advertising, public relations, news, sales or other media without the Consultant‘s prior express written consent.
7. This report and any values expressed herein represent the opinion of the Consultant, and the Consultant’s fee is in no way contingent upon the reporting of a specific value, a stipulated result, the occurrence of a subsequent event or upon any finding to be reported.
8. Sketches, drawings and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys. The reproduction of any information generated by architects, engineers or other consultants and any sketches, drawings or photographs is for the express purpose of coordination and ease of reference only. Inclusion of such information on any drawings or other documents does not constitute a representation by Consultant as to the sufficiency or accuracy of the information.
9. Unless otherwise agreed, (1) information contained in this report covers only the items examined and reflects the condition of those items at the time of inspection; and (2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing or coring. Consultant makes no warranty or guarantee, express or implied that the problems or deficiencies of the plans or property in question may not arise in the future.
10. Loss or alteration of any part of this Agreement invalidates the entire report.

**Report Assumptions and Limitations:**

This report provides information about the subject trees at the times of the inspection. Trees and conditions may change over time. This report is only valid for the trees with the conditions present at the times of the inspections. All observations were made while standing on the ground. The inspection consisted of visual observations, using a probe to gain additional information about decay and hollow portions of the tree, and if needed, light excavation was performed to observe shallow depth areas below grade at the base of the trees. No further examinations were requested or performed.

Sincere attempts were made to accurately locate the trees and show the trees on the pan. All tree locations were attempted to be shown as observed in the field.

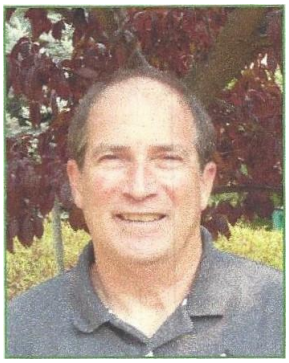
Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist or seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that can fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatments, pruning, and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, landlord-tenant matters, etc. Arborists cannot take such issues into account unless complete and accurate information is given to the arborist. The person hiring the arborist accepts full responsibility for authorizing the recommended treatment or remedial measures.

Trees can be managed, but they cannot be controlled. To live near a tree is to accept some degree of risk. The only way to eliminate all risks is to eliminate all trees. Our company goal is to help clients enjoy life with trees, and grow better trees.

California Tree and Landscape Consulting, Inc.



# GORDON MANN

EDUCATION AND QUALIFICATIONS

| | |
|---|---|
| 1977 | Bachelor of Science, Forestry, University of Illinois, Champaign. |
| 1982 - 1985 | Horticulture Courses, College of San Mateo, San Mateo. |
| 1984 | Certified as an Arborist, WE-0151A, by the International Society of Arboriculture (ISA). |
| 2004 | Certified as a Municipal Specialist, WE-0151AM, by the ISA. |
| 2011 | Registered Consulting Arborist, #480, by the American Society of Consulting Arborists (ASCA). |
| 2003 | Graduate of the ASCA Consulting Academy. |
| 2006 | Certified as an Urban Forester, #127, by the California Urban Forests Council (CaUFC). |
| 2011 | TRACE Tree Risk Assessment Certified, continued as an ISA Qualified Tree Risk Assessor (T.R.A.Q.). |

PROFESSIONAL EXPERIENCE

2016 – Present CALIFORNIA TREE AND LANDSCAPE CONSULTING, INC (CalTLC). Vice President and Consulting Arborist. Auburn. Mr. Mann provides consultation to private and public clients in health and structure analysis, inventories, management pianning for the care of trees, tree appraisal, risk assessment and management, and urban forest management plans.

1986 - Present MANN MADE RESOURCES. Owner and Consulting Arborist. Auburn. Mr. Mann provides consultation in municipal tree and risk management, public administration, and developing and marketing tree conservation products.

2015 – 2017 CITY OF RANCHO CORDOVA, CA. Contract CityArborist. Mr. Mann serves as the City's first arborist, developing the tree planting and tree maintenance programs, performing tree inspections, updating ordinances, providing public education, and creating a management plan,

1984 - 2007 CITY OF REDWOOD CITY, CA. City Arborist, Arborist, and Public Works Superintendent.

Mr. Mann developed the Tree Preservation and Sidewalk Repair Program, supervised and managed the tree maintenance program, performed inspections and administered the Tree Preservation Ordinance. Additionally, he oversaw the following Public Works programs: Streets, Sidewalk, Traffic Signals and Streetlights, Parking Meters, Signs and Markings, and Trees.

1982 - 1984CITY OF SAN MATEO, CA. Tree Maintenance Supervisor.
For the City of San Mateo, Mr. Mann provided supervision and management of the tree maintenance program, and inspection and administration of the Heritage Tree Ordinance.

1977 - 1982VILLAGE OF BROOKFIELD, IL. Village Forester.
Mr. Mann provided inspection of tree contractors, tree inspections, managed the response to Dutch Elm Disease. He developed an in-house urban forestry program with leadworker, supervision, and management duties to complement the contract program.

1979 INTERNATIONAL SOCIETY OF ARBORICULTURE. Member.

- Board of Directors (2015 - Present)
- True Professional ofArboriculture Award (2011) o In recognition of material and substantial contribution to the progress of arboriculture and having given unselfishly to support arboriculture.

1982 - Present WESTERN CHAPTER ISA (WCISA). Member.

- Chairman of the Student Committee (2014 - Present)
- Member of the Certification Committee (2007 - Present)
- Member of the Municipal Committee (2009 - 2014) ◦ Award of Merit (2016) In recognition of outstanding meritorious service in advancing the principles, ideals and practices of arboriculture.
- Annual Conference Chair (2012)
- President (1992 - 1993)
- Award of Achievement and President's Award (1990)
- 1985 - Present CALIFORNIA URBAN FORESTS COUNCIL (CaUFC). Member; Board Member (2010 - Present)

1985 - Present SOCIETY OF MUNICIPAL ARBORISTS (SMA). Member. e Legacy Project of the Year (2015) o In recognition of outstanding meritorious service in advancing the principles, ideals and practices of arboriculture.
◦ Board Member (2005 - 2007)

2001 - Present AMERICAN SOCIETY OF CONSULTING ARBORISTS. Member. e Board of Directors (2006 - 2013)
• President (2012)

2001 - Present CAL FIRE. Advisory Position.
• Chairman of the California Urban Forestry Advisory Committee (2014 - Present)

2007 – Present AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI): A300 TREE MAINTENANCE STANDARDS COMMITTEE. SMA Representative and Alternate.

- Alternative Representative for SMA (2004 - 2007; 2012 - Present)
- Representative for SMA (2007 - 2012)

2007 - Present SACRAMENTO TREE FOUNDATION. Member and Employee.

- Co-chairman of the Technical Advisory Committee (2012 - 2018), member 2018- present
- Urban Forest Services Director (2007 - 2009)
- Facilitator of the Regional Ordinance Committee (2007 - 2009)

1988 - 1994 TREE CLIMBING COMPETITION. Chairman.

- Chairman for Northern California (1988 - 1992)
- Chairperson for International (1991 - 1994)

PUBLICATIONS AND LECTURES

Mr. Mann has authored numerous articles in newsletters and magazines such as Western Arborist, Arborist News, City Trees, Tree Care Industry Association, Utility Arborists Association, CityTrees, and Arborists Online, covering a range of topics on Urban Forestry, Tree Care, and Tree Management. He has developed and led the training for several programs with the California Arborist Association. Additionally, Mr. Mann regularly presents at numerous professional association meetings on urban tree management topics.

## Certificate of Performance

I, Gordon Mann, certify that:

I have personally inspected the trees and site referred to in this report and have stated my findings accurately. The extent of the inspection is stated in the attached report under Assignment;

I have no current or prospective interest in the vegetation, or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved;

The analysis, opinions and conclusions stated herein are my own and are based on current scientific procedures and facts;

My analysis, opinions, and conclusions were developed, and this report has been prepared according to commonly accepted arboricultural practices;

No one provided significant professional assistance to me, except as indicated within the report;

My compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client, or any other party, nor upon the results of the assignment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member in good standing of the International Society of Arboriculture (ISA) and an ISA Certified Arborist and Municipal Specialist. I am also a Registered Consulting Arborist member in good standing of the American Society of Consulting Arborists. I have been involved in the practice of arboriculture and the care and study of trees for over 45 years.

Signed:



Gordon Mann
Date: May 7, 2024

# Evaluation of Potential California Red-Legged Frog (*Rana aurora draytonii*) Habitat on the Dixon Ranch Subdivision Project El Dorado County, California




Prepared by:

**Eric C. Hansen**
Consulting Environmental Biologist
4200 N. Freeway Boulevard, Suite 4
Sacramento, CA 95834


For:

**Dixon Ranch Partners, LLC**
949 Tuscan Lane
Sacramento, California 95864

September 9, 2013

# Evaluation of Potential California Red-Legged Frog (*Rana aurora draytonii*) Habitat on the Dixon Ranch Subdivision Project, El Dorado County, California

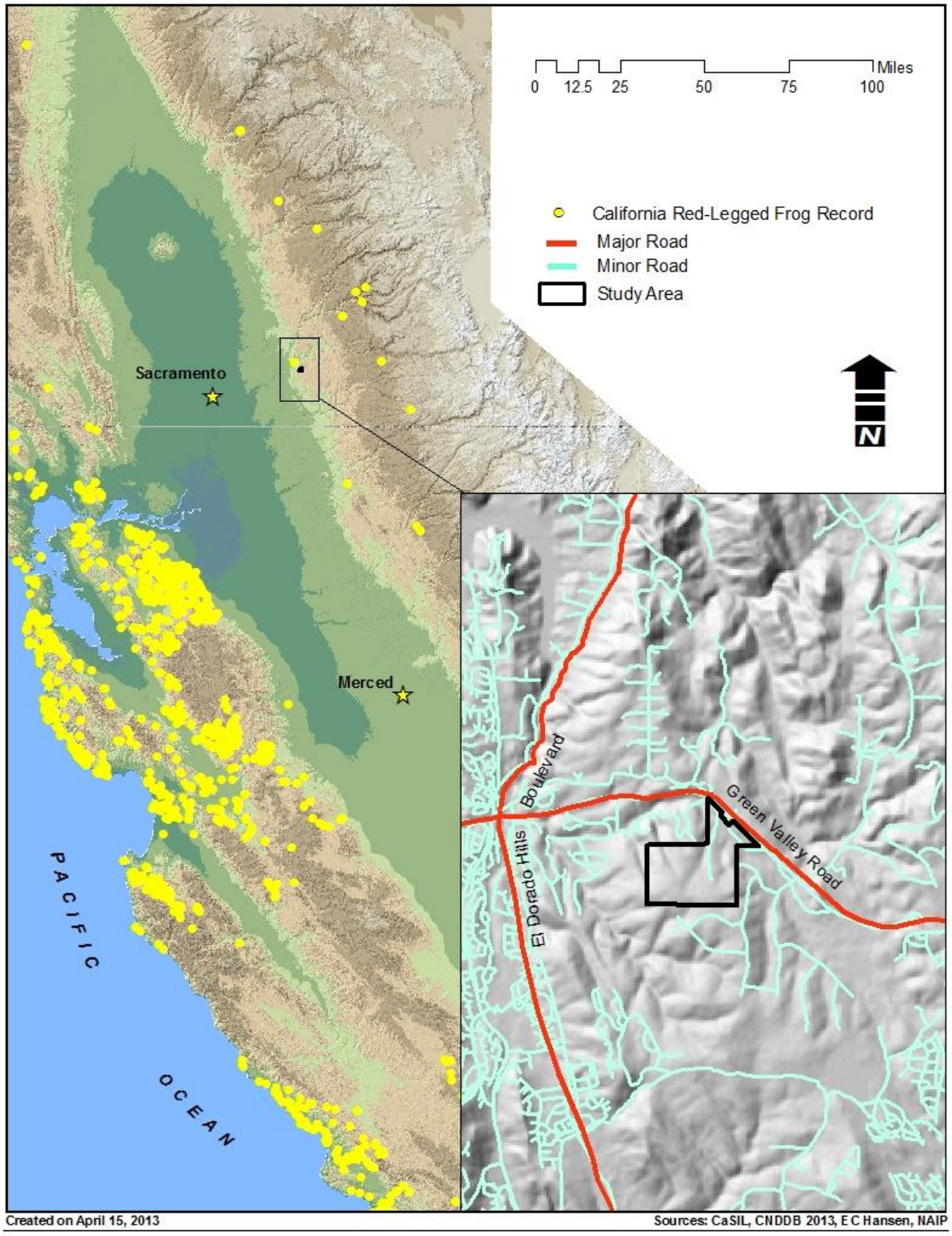
## INTRODUCTION

This report provides the results of California red-legged frog (*Rana aurora draytonii*) habitat suitability assessments on the Dixon Ranch Subdivision Project site (project site), located south of Green Valley Road in El Dorado County, California. A site visit was conducted for this purpose on 22 April 2013. The Louie Ponds consist of two contiguous impoundments situated in the Green Springs Creek corridor totaling approximately 3.8 acres in combined surface area. In order to provide an adequate regional perspective, an approximately 301-acre study area established during prior wetland delineations and rare plant species assessments (Gibson & Skordal 2011, 2012) were used to complete the assessment. The study area is located in Section 24, township 10 North, Range 8 East; Section 19, Township 10 North, Range 9 East, MDB&M, El Dorado County, California. The study area ranges from approximately 950-feet to 1240 feet in elevation, can be found at UTM 670,016 M E; 4,285,698 M N (Zone 10 North), and is portrayed on the Clarksville, California 7.5-Minute Series Topographic Quadrangle. Locator, vicinity, and detail maps are included in Figure 1 and Figure 2.

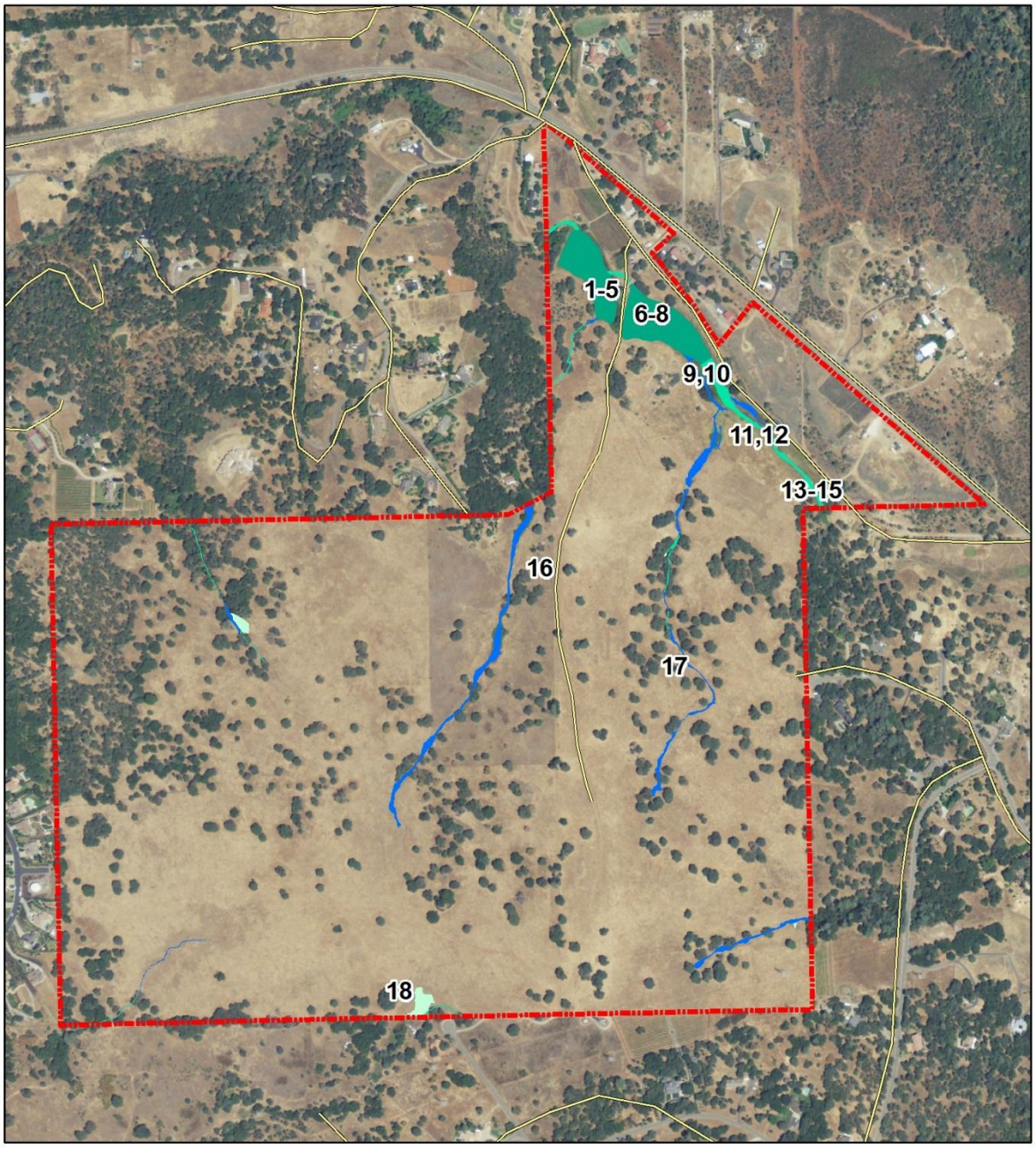
To access the site from Sacramento, drive east on Highway 50 into El Dorado County and exit to the north onto El Dorado Hills Boulevard, travel north on El Dorado Hills Boulevard, and then turn right onto Green Valley Road. Continue east on Green Valley Road until reaching West Green Springs Drive. The study area is located southeast of the West Green Springs Drive-Green Valley Road intersection. Existing or approved adjacent subdivisions include Green Springs Ranch to the east and southeast, Serrano to the southwest, and Highland View to the west.

The project site contains habitats suitable for California red-legged frogs, possessing both the aquatic and upland terrestrial habitats required by the species; however, the number of reported California red-legged frog occurrences in El Dorado County is low. No California red-legged frog locality records fall within one mile (1.6 km) of the project site Only one California red-legged frog locality record, consisting of one unverified juvenile frog (California Natural Diversity Database [CNDDB] Occurrence Number 814) falls within 2.8 miles (4.5 km) of the project site (CNDDB 2013). With the exception of the unverified juvenile frog reported near Folsom Lake, all California red-legged frogs recorded in this region of the Sierra Nevada occur above 2,000 feet, well above the approximately 1,050-foot mean elevation of the project site. While the project site contains habitat suitable for red-legged frogs, the presence of bullfrogs and predatory gamefish, distance from verified populations of red-legged frogs, and low site elevation relative to regional frog populations reduce the likelihood that red-legged frogs occur on the project site. The methodologies used to complete this assessment are presented below, and maps of regional species distribution are included as figures. Photographs of pertinent features and completed habitat assessment forms are included as Appendices A and B, respectively.

## FIGURE 1. VICINITY MAP



## FIGURE 2. STUDY AREA DETAIL AND KEY TO PHOTOGRAPHS



## HABITAT ASSESSMENT

### Legal Status

The California red-legged frog was federally listed as Threatened on June 24, 1996 and is designated as a California Species of Special Concern.

### Life History

This species is a lowland and foothill frog inhabiting moist environments from sea level to 2,440 meters (8,000 feet) (Stebbins 2003). It frequents the permanent cool waters of ponds, lakes, reservoirs, and streams offering dense shrubbery and emergent vegetation, such as cattails (*Typha* sp.), that provide cover and protection from predators. Red-legged frogs may disperse far from water to moist wooded areas following breeding. Individuals may engage in overland movements of up to 3.2 kilometers (2 miles) (Stebbins 2003).

The breeding period is short, often lasting only 1 to 2 weeks, usually from January to April, depending upon the locality and seasonal weather conditions. Larvae generally require 4 to 5 months to attain metamorphosis. Exotic species such as bullfrogs (*Lithobates catesbeianus*) and green sunfish (*Lepomis cyanellus*) compete with and prey upon red-legged frogs.

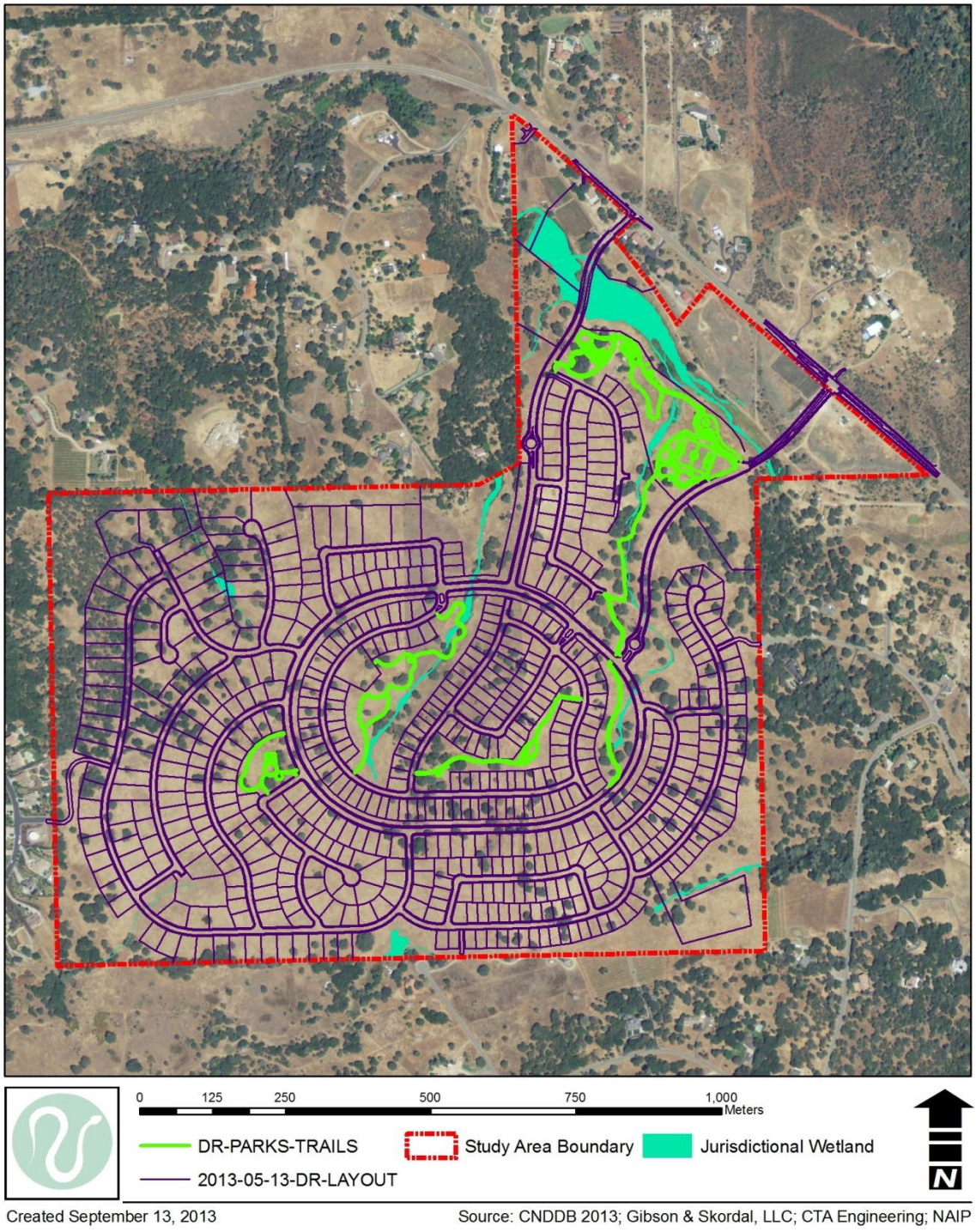
### Proposed Action

#### *Project Description*

The Dixon Ranch Project proposes to subdivide 280+/- acres into 444 single family detached residential units, 160 age-restricted single family detached units (age restricted to older adults), and includes retention of one existing single family residence for a total of 604 new units and one existing unit. The project includes preservation or creation of 84.1+/- acres (30%) of open space including parks, trails, landscaped lots, and native open spaces. The project includes on-site and off-site infrastructure to serve the development. Construction of a clubhouse for the age-restricted units is also proposed. Build-out will likely occur over many years, but ultimately will be dictated by market demands. The proposed development plan is shown in Figure 3.

Required project approvals include: a General Plan Amendment (File No. A11-0006); Zone Change (File No. Z11-0008); Planned Development (File No. PD11-0006); Tentative Map (File No. TM11-1505); annexation into the El Dorado Irrigation District; annexation into the El Dorado Hills Community Service District; and annexation into the El Dorado Hills County Water District (El Dorado Hills Fire Department).

**FIGURE 3. PROPOSED DEVELOPMENT PLAN**




Created September 13, 2013

Source: CNDDB 2013; Gibson & Skordal, LLC; CTA Engineering; NAIP

***General Plan Amendment Description***

The project is currently located entirely within the General Plan Community Region (urban limit line) of El Dorado Hills and is designated as Low Density Residential (LDR) land use, with the exception of 1.5+/- acres at the southeast corner of the property that is designated as Open Space (OS) and associated with the existing SMUD power transmission corridor. LDR allows for a maximum density of 1 dwelling unit per 5 acres. The proposed project is applying for a change in the land use designations on the site to High Density Residential (HDR) allowing for a density range of 1 to 5 units per acre; Medium Density Residential (MDR) allowing for a maximum of 1 dwelling unit per acre; and Open Space (OS). The proposed project is retaining the existing Low Density Residential (LDR) land use designation for the existing residence to remain.

***Planned Development Description***

The project is a planned development. Proposed uses within the project are as follows:

1) 444 single family detached residential units with lot sizes ranging from 5,775 sf to 3.32 ac

| Product Type | Qty | Land Use |
|---|---|---|
| Village Small Lot | 149 | HDR |
| Village Large Lot | 173 | HDR |
| Hillside | 54 | HDR |
| Hillside Custom | 58 | HDR |
| Estate Residential | 5 | MDR |
| Estate Residential Large Lot | 5 | MDR |
| | 444 | |

2) 160 age-restricted single family detached residential units with lot sizes ranging from 4,725 sf to 12,685 sf

| Product Type | Qty | Land Use |
|---|---|---|
| Age-Restricted Small Lot | 80 | HDR |
| Age-Restricted Large Lot | 80 | HDR |
| | 160 | |

3) One existing Low Density Residential (LDR) unit to remain.
4) One Clubhouse lot (Lot C)
5) One EID lot for a proposed pump station
6) Public and private roadways
7) 84.1+/- acres or 30% total open space, including native open space, parks and landscape lots.
    a. Includes 11.14 acres of Parks including:
        - One Village Park (Lot A)
        - One Neighborhood Park (Lot B)

### *Lighting*

Outdoor lighting in conformance with Section 17.14.170 of the County Ordinance Code is anticipated to be provided at major intersections, mid-block pedestrian crossings, along sag vertical curves where needed to establish adequate sight distance and as appropriate for public safety. Limited safety and security lighting and indirect shielded lighting will also be provided at park sites, gates and clubhouse including but not limited to parking areas, play areas, and walkways where appropriate. The project does not propose to use lighted ball fields or other light intensive uses at the proposed park sites.

## Existing Field Conditions

The project site is situated in the foothills of the Sierra Nevada on rolling to relatively flat terrain at an average elevation of about 1,050 feet. The project site is primarily used as pasturage and currentlycontains two habitable structures. Newer residential developments are located to the west while ranchettes occupy lands to the north and east. The site was very lightly grazed by cattle and horses at the time of field surveys.

The majority of the site generally drains to the north/northeast into Green Spring Creek. Green Spring Creek, which traverses the northern portion of the study area from east to west, is tributary to Folsom Reservoir by way of New York Creek. The southwestern corner of the parcel appears to drain to the south towards Allegheny Creek which is located outside of the study area boundary. Allegheny Creek is also tributary to Folsom Reservoir by way of Green Spring Creek and New York Creek, respectively.

## Methods

A field assessment was conducted on 22 April 2013 according to U.S. Fish and Wildlife Service (USFWS) guidelines (April 4, 1997 Memorandum 1-1-97-TA-1093 Dissemination of Interim Guidance on Site Assessment and Field Surveys for California Red-Legged Frogs; August 2005 Revised Guidance on Site Assessment and Field Surveys for California Red-Legged Frogs). These guidelines require that in assessing the likelihood that California red-legged frogs may occur at a given locale, information satisfying the following elements should be compiled and submitted to USFWS for further evaluation and guidance:

Element 1. Is the project within the current or historic range of the California red-legged frog?

Element 2. What are the known localities of California red-legged frog within the project site and within 1 mile (1.6 kilometers) (km) of the project boundaries? This is to place the project in regional perspective.

Element 3. What are the habitats within the project site and within 1 mile (1.6 km) of the project boundaries?

To satisfy these elements, first, California red-legged frog locality records were obtained by conducting a computer search of the most recent version of the CNDDB (2013). Next, to place the project in regional perspective, records falling within 1- and 30-mile (1.6 and 48.3-kilometer) radii of the project site were identified using the Geographic Information Systems (GIS) program ArcMap 9.2. GIS-generated maps are used to illustrate red-legged frog distribution relative to the project site (see Figure 1, Figure 3). Finally, habitats within and surrounding the project site were identified using a combination of site plans, field surveys, and GIS analysis using digitized USGS 7.5-minute topographic maps and digital orthographic quarter quadrangle (DOQQ) maps (digitized aerial maps) from the California Spatial Information Library (http://gis.ca.gov/).

While specific protocol level field surveys for California red-legged frogs were not conducted as part of this assessment, cursory field surveys for other special-status reptiles and amphibians were conducted incidental to this assessment, particularly for those species frequently associated with habitats favored by California red-legged frogs. Results are provided below.

## Results

**Element 1 —** The project site is situated at the edge of the easterly extent of the California red-legged frog's historical range along the western slopes of the Sierra Nevada, which extends from Plumas County south to Tuolumne County (Jennings and Hayes 1994, CNDDB 2013).

**Element 2 —**The project site lies approximately 2.8 mile (4.5 km) from the (unverified) juvenile frog reported on the east side of Folsom Lake, southwest of Iron Mountain, 17.7 miles (28.5 km) from undisclosed localities in El Dorado County (Georgetown Quad), and 23.6 miles (40.0 km) from the other two verified populations of California red-legged frogs extant in this portion of the Sierra Nevada (Michigan Bluff area and Weber Creek) (CNDDB 2013). All other records documented within El Dorado County and adjacent Placer County fall more than 25 miles (40.2 km) from the project site; records are reported in Table 1 and are depicted in Figure 1 and Figure 4.

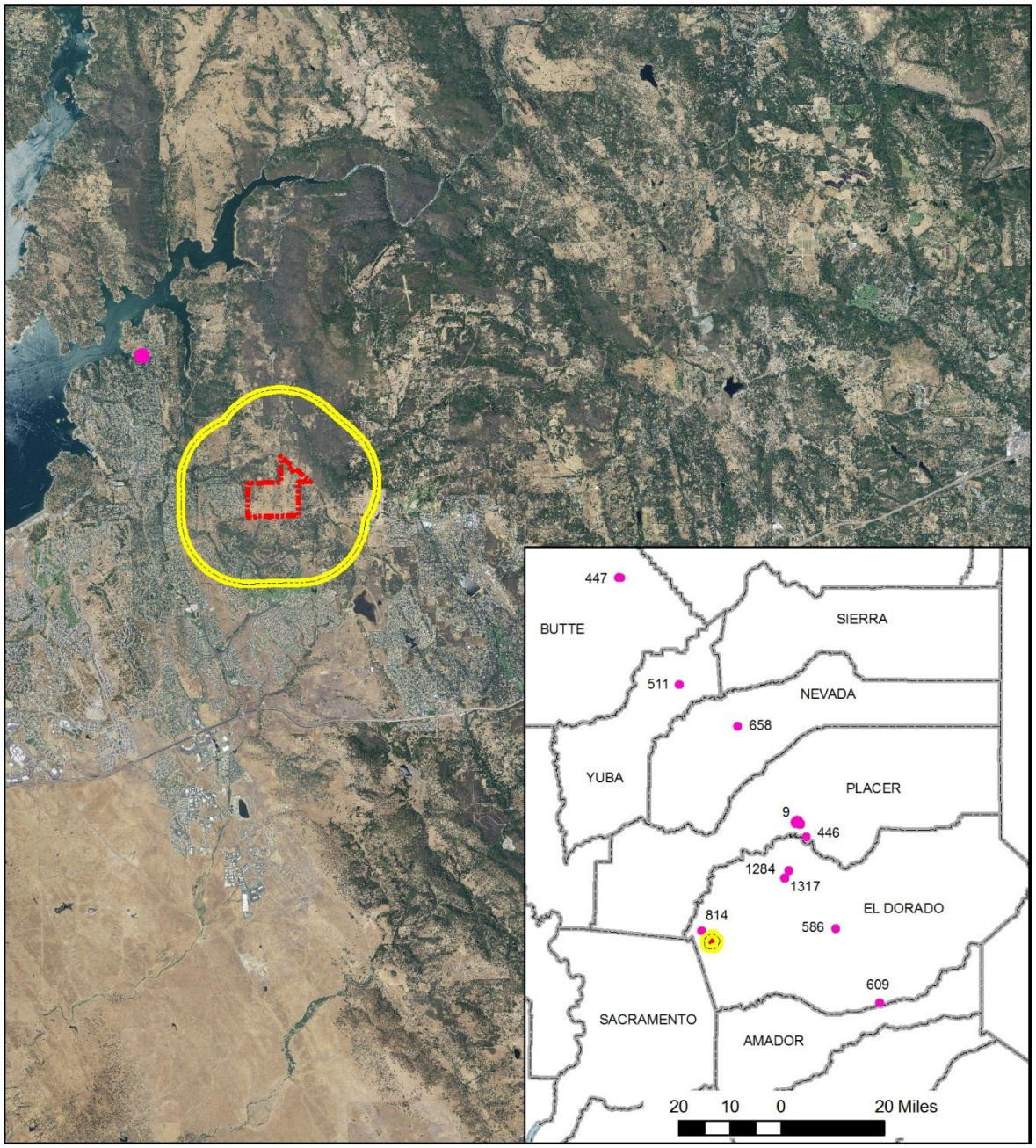
**Element 3 —** Habitats associated with Green Springs Creek possess both aquatic and upland characteristics suitable for California red-legged frogs. Aquatic habitats consist of interconnected streams, swales, and associated wetlands. Terrestrial habitats consist mostly of foothill oak woodland. Habitats are described in detail below. Photographs of selected site features are included in Appendix A.

**Table 1. CNDDB occurrence records within approximately 50 miles (80.5 km) of the project site**

| Occ. No. | USGS 7.5' Topographic Quadrangle | Township | Range | Section | County | Year Last Seen | Approx.Distance from Project Site | Elevation |
|---|---|---|---|---|---|---|---|---|
| 9 | Michigan Bluff | 14N | 11E | 21 | Placer | Pre-1951 | 28.6 mi | 3,400 ft |
| 446 | Michigan Bluff | 13N | 11E | 01 | Placer | 2001 | 26.7 mi | 3,200 ft |
| 511 | Challenge | 18N | 07E | 10 | Yuba | 2003 | 50.4 mi | 2,100 ft |
| 586 | Sly Park | 10N | 12E | 01 | El Dorado | 2002 | 23.6 mi | 3,200 ft |
| 609 | Caldor | 18N | 14E | 21 | El Dorado | 2002 | 34.4 mi | 4,200 ft |
| 658 | North Bloomfield | 17N | 09E | 27 | Nevada | 2007 | 42.3 mi | 3,050 ft |
| 814 | Clarksville | 10N | 08E | 10 | El Dorado | 2005 | 2.8 mi | 800 ft |
| 890* | Michigan Bluff | -- | -- | -- | Placer | 2006 | 28.9 mi | -- |
| 1284 | Georgetown | -- | -- | -- | El Dorado | 2009 | 19.3 mi | -- |
| 1317 | Georgetown | -- | -- | -- | El Dorado | 2009 | 17.7 mi | -- |

*Details for records displayed in red are suppressed in the commercial version of the CNDDB

## FIGURE 4. PROJECT SITE RELATIVE TO CNDDB OCCURRENCE RECORDS




Created May 10, 2013

Source: CNDDB 2013; NAIP

## Habitats within 1 mile (1.6 km) of the Project Site

### *Plant Communities*

Plant communities are described by Gibson & Skordal (2011). The study area encompasses several habitat types including non-native annual grasslands, foothill oak savannah/woodland, and numerous water features including agricultural ponds, intermittent and ephemeral drainages, seasonal wetlands, and seeps. The majority of the site supports oak savannah/woodland composed of valley oaks (*Quercus lobata*), live oaks (*Quercus wislizenii*), and blue oaks (*Quercus douglasii*).

The understory consists of dogtail (*Cynosurus echinatus*), wild oats (*Avena fatua*), rip-gut brome (*Bromus diandrus*), medusa head (*Taeniatherum caput-medusae*), and soft chess (*Bromus hordeaceus*). Interspersed between the oak woodlands/savannah are areas of non-native annual grasslands characterized by wild oats (*Avena fatua*), ripgut brome (*Bromus diandrus*), and medusa-head (*Taeniatherum caput-medusae*). Other common species include yellow start-thistle (*Centaurea solstitialis*), perennial rye grass (*Lolium perenne*), little quacking grass (*Briza minor*), soft chess (*Bromus hordeaceus*), prickly lettuce (*Lactuca serriola*), and split-leaf geranium (*Geranium dissectum*).

### *Hydrology*

Wetland components are described by Gibson & Skordal (2012). Green Springs Creek and two in-channel impoundments referred to as the Louie Ponds represent the largest water features within the study area. Green Springs Creek and its associated ponds contained several inches of flowing water and supported thick growths of hardstem bulrush (*Scirpus acutus*), creeping spike rush (*Eleocharis macrostachya*), and narrow-leaf cattails (*Typha angustifolia*). Woody vegetation consisted of cottonwoods (*Populus fremontii*) and narrow-leaf willow (*Salix exigua*). Several wetland swale-seep complexes are located within the hillier southern portion of study area. Seeps are most often associated with sloping terrain and derived primarily from groundwater seepage in the winter and spring, while seasonal wetland swales represent vegetated linear sloping drainages that lack a defined bed and bank. Common species included Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), curly dock (*Rumex crispus*), perennial rye grass (*Lolium perenne*), water cress (*Rorippa nasturtium-aquaticum*), tall flat sedge (*Cyperus eragrostis*), and spiny-fruited buttercup (*Ranunculus muricatus*). Photographs of the individual features are provided in Appendix A.

### *Soils*

According to the April 1974, "**Soil Survey of El Dorado Area, California**," four soil map units occur within the study area: Auburn very rocky silt loam, 2-30 percent slopes (AxD), Auburn silt loam, 2-30 percent slopes (AwD), Placer diggings (PrD), and Serpentine Rock Land (SaF).

***Observed Species***

Adult bullfrogs and juvenile Centrarchid fishes (*Lepomis* spp.) were observed within Green Springs Creek and the Louie Ponds; both species can compete with and prey upon red-legged frogs. Larval Western toad (*Bufo boreas*) and Sierran treefrog (Formerly *Pseudacris regilla* - Pacific Treefrog) were also observed, but neither are known to adversely affect red-legged frogs.

## SUMMARY

Permanent, suitable red-legged frog habitat is present on the project site within Green Springs Creek and the associated impoundment referred to as the Louie Ponds. Although drainage features on-site are characterized as ephemeral or intermittent, they also provide potential habitat for dispersing red-legged frogs when they are flowing or when they possess pooled water following winter and spring rains. Although no red-legged frogs were observed during the field surveys, there is ample supporting habitat on the project site.

Adult bullfrogs and juvenile Centrarchid fishes (*Lepomis* spp.) were observed within Green Springs Creek and Louie Pond, both of which can compete with and prey upon red-legged frogs. Larval Western toad (*Bufo boreas*) and Sierran treefrog (Formerly *Pseudacris regilla* - Pacific Treefrog) were also observed, but neither are known to adversely affect red-legged frogs.

The regional presence of California red-legged frogs remains unverified. A juvenile (unverified) California red-legged frog was reported in 2005 within 2.8 miles (4.5 km) of the Proposed Project from a drainage at the end of Fitch Way, on the east side of Folsom Lake, southwest of Iron Mountain and north of Highway 50 (CNDDB 2013), but no others are reported from the immediate vicinity. California red-legged frogs have been verified in recent years in El Dorado County in Weber Creek, near Placerville (early 1990s) (Miriam Green Associates 1996, CNDDB 2013), in southern Placer County near Georgetown, and in Placer County near Michigan Bluff, but no verified populations are reported within 17.7 miles (28.5 km) of the project site. With the exception of the unverified juvenile frog reported near Folsom Lake, all California red-legged frogs recorded in this region of the Sierra Nevada occur above 2,000 feet, well above the approximately 1,050-foot mean elevation of the project site.

In closing, while the project site contains habitat suitable for red-legged frogs, the presence of bullfrogs and predatory gamefish, distance from verified populations of red-legged frogs, and low site elevation relative to regional frog populations reduce the likelihood that red-legged frogs occur on the project site.

## REFERENCES

California Natural Diversity Database (CNDDB). Commercial Version, April 2013. Geographic Information Systems (GIS) data and computer printout of sensitive species records in California. California Department of Fish and Game, Natural Heritage Division, Sacramento, CA.

Jennings, R.M. and M.P. Hayes. 1994. Amphibian and reptile species of special concern in California. Final report submitted to the California Department of Fish and Game Inland Fisheries Division, Rancho Cordova, CA: Contract 8023. 255 pp.

Gibson & Skordal, LLC. 2011. Special Status Plant Species Evaluation, Dixon Ranch, El Dorado County, California. Prepared for Dixon Ranch Partners, LLC. Prepared August, 201.

Gibson & Skordal, LLC. 2012. Jurisdictional Delineation and Special Status Species Evaluation, Dixon Ranch, El Dorado County, California. Prepared for Dixon Ranch Partners, LLC. Prepared August, 2011 and revised May, 2012.

Stebbins, R.C. 2003. A field guide to western reptiles and amphibians. 3rd edition. Houghton Mifflin Co.

# Appendix A: Photographs



1. Outflow to lower pond (NW).



2. Lower pond (WNW).



3. Lower pond showing vegetation at center crossing (NW).



4. S side lower pond showing edge characteristics - center crossing in background (NNE).



5. S side of lower pond showing edge characteristics - center crossing in background (NW).



6. One of many adult bullfrogs observed in upper pond (east end).



7. Outflow from upper pond (E end) (SE).



8. Lower pond showing vegetation at center crossing (SE).



9. Gravel-bottomed channel of Green Springs Creek flowing into upper pond (NW). Hardstem bulrush in background.



10. Gravel-bottomed channel of Green Springs Creek flowing into upper pond (SE). Hardstem bulrush in background.



11. Overhanging vegetation (*Rubus* spp.) along the margin of Green Springs Creek (W).



12. Intermittent riffles along Greens Creek (ESE).



13. Green Springs Creek at the E end of the project site (WNW).



14. Green Springs Creek upstream of the E end of the project site (SE).



15. Western toad larvae in Green Springs Creek at the E end of the project site.



16. Seasonal wet swale at the W center of the project site (see Figure 2).



17. Seasonal wet swale at the E center of the project site (see Figure 2).



18. Depressional seeps at the southern edge of the project site (see Figure 2).

Appendix B

## California Red-legged Frog Habitat Site Assessment Data Sheet

**Site Assessment reviewed by**_____ _____ _____
**(FWS Field Office) (date) (biologist)**

**Date of Site Assessment:** 04/22/2013
**(mm/dd/yyyy)**

**Site Assessment Biologists:** Hansen, Eric _____
**(Last name) (first name) (Last name) (first name)**

_____ _____
**(Last name) (first name) (Last name) (first name)**

**Site Location:** **El Dorado County, Dixon Ranch Project, UTM 670,016 E; 4,285,698 N (Zone 10 N)**
**(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).**

****ATTACH A MAP** (include habitat types, important features, and species locations)**

**Proposed project name:** Dixon Ranch Subdivision Project
**Brief description of proposed action:** The Dixon Ranch Project proposes to subdivide 280+/- acres into 444 single family detached residential units, 160 age-restricted single family detached units (age restricted to older adults), and includes retention of one existing single family residence for a total of 604 new units and one existing unit. The project includes preservation or creation of 84.1+/- acres (30%) of open space including parks, trails, landscaped lots, and native open spaces. The project includes on-site and off-site infrastructure to serve the development. Construction of a clubhouse for the age-restricted units is also proposed. Build-out will likely occur over many years, but ultimately will be dictated by market demands.

1) Is this site within the current or historic range of the CRF (circle one)? YES NO

2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? YES NO

If yes, attach a list of all known CRF records with a map showing all locations.

## GENERAL AQUATIC HABITAT CHARACTERIZATION

*(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)*

**POND**:

Size: 3.8 acres (2.1 acre and 1.7 acres per pond section) Maximum depth: < 4m

Vegetation: Green Springs Creek and its associated ponds contained several inches of flowing water and supported thick growths of hardstem bulrush (Scirpus acutus), creeping spike rush (Eleocharis macrostachya), and narrow-leaf cattails (Typha angustifolia). Woody vegetation consisted of cottonwoods (Populus fremontii) and narrow-leaf willow (Salix exigua).

Substrate: sand, rock, and cobble

**Perennial or Ephemeral** *(circle one).* If ephemeral, date it goes dry:_____

Ponds

Appendix B

## California Red-legged Frog Habitat Site Assessment Data Sheet

**STREAM**:

Bank full width: N/A

Depth at bank full: N/A

Stream gradient: _____

Are there pools (circle one)? YES NO (dry at time of site visit)

If yes,

Size of stream pools: _____

Maximum depth of stream pools: _____

Characterize non-pool habitat: run, riffle, glide, other: _____

_____

_____

Vegetation: emergent, overhanging, dominant species: _____

_____

_____

Substrate: _____

_____

Bank description: _____

_____

_____

**Perennial or Ephemeral** *(circle one).* If ephemeral, date it goes dry: _____

| Other aquatic habitat characteristics, species observations, drawings, or comments: |
|---|
| |

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs (see Appendix A, photos 1-8)
3. Maps with important habitat features and species location (see Figure 2)

Ponds

# California Red-legged Frog Habitat Site Assessment Data Sheet

**Site Assessment reviewed by**_____ _____ _____
**(FWS Field Office) (date) (biologist)**

**Date of Site Assessment:** 04/22/2013
**(mm/dd/yyyy)**

**Site Assessment Biologists:** Hansen, Eric
**(Last name) (first name)** **(Last name) (first name)**

**(Last name) (first name)** **(Last name) (first name)**

**Site Location:** **El Dorado County, Dixon Ranch Project, UTM 670,016 E; 4,285,698 N (Zone 10 N)**
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****ATTACH A MAP** (include habitat types, important features, and species locations)**

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1) Is this site within the current or historic range of the CRF (circle one)? YES NO

2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? YES NO

If yes, attach a list of all known CRF records with a map showing all locations.

## GENERAL AQUATIC HABITAT CHARACTERIZATION

*(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)*

**POND**:

Size: N/A Maximum depth: N/A

Vegetation: _____

Substrate: _____

**Perennial or Ephemeral** *(circle one).* If ephemeral, date it goes dry: _____

Green Springs Creek

Appendix B

## California Red-legged Frog Habitat Site Assessment Data Sheet

**STREAM**:

Bank full width: ± 4 meters

Depth at bank full: < 0.5 meter

Stream gradient: <1%

Are there pools (circle one)? YES NO

If yes,

Size of stream pools: ± 100 meters$^2$

Maximum depth of stream pools: <0.5 meter

Characterize non-pool habitat: run, riffle, glide, other: _____

Vegetation: Green Springs Creek and its associated ponds contained several inches of flowing water and supported thick growths of hardstem bulrush (*Scirpus acutus*), creeping spike rush (*Eleocharis macrostachya*), and narrow-leaf cattails (*Typha angustifolia*). Woody vegetation consisted of cottonwoods (*Populus fremontii*) and narrow-leaf willow (*Salix exigua*).

Substrate: mixed soil and cobble

Bank description: mixed slope to undercut with open sand and gravel as well as well as woody and herbaceous vegetation

**Perennial or Ephemeral** *(circle one).* If ephemeral, date it goes dry: Unknown

| Other aquatic habitat characteristics, species observations, drawings, or comments: |
|---|
| |

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs (see Appendix A, photos 9-15)
3. Maps with important habitat features and species location (see Figure 2)

Green Springs Creek

Appendix B

## California Red-legged Frog Habitat Site Assessment Data Sheet

**Site Assessment reviewed by**_____ _____ _____
**(FWS Field Office) (date) (biologist)**

**Date of Site Assessment:** 04/22/2013
**(mm/dd/yyyy)**

**Site Assessment Biologists:** Hansen, Eric _____
**(Last name) (first name) (Last name) (first name)**

_____ _____
**(Last name) (first name) (Last name) (first name)**

**Site Location:** **El Dorado County, Dixon Ranch Project, UTM 670,016 E; 4,285,698 N (Zone 10 N)**
**(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).**

****ATTACH A MAP** (include habitat types, important features, and species locations)**

**Proposed project name:** Dixon Ranch Subdivision Project
**Brief description of proposed action:** The Dixon Ranch Project proposes to subdivide 280+/- acres into 444 single family detached residential units, 160 age-restricted single family detached units (age restricted to older adults), and includes retention of one existing single family residence for a total of 604 new units and one existing unit. The project includes preservation or creation of 84.1+/- acres (30%) of open space including parks, trails, landscaped lots, and native open spaces. The project includes on-site and off-site infrastructure to serve the development. Construction of a clubhouse for the age-restricted units is also proposed. Build-out will likely occur over many years, but ultimately will be dictated by market demands.

1) Is this site within the current or historic range of the CRF (circle one)? YES NO

2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? YES NO

If yes, attach a list of all known CRF records with a map showing all locations.

## GENERAL AQUATIC HABITAT CHARACTERIZATION

*(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)*

**POND**:

Size: _____ Maximum depth: _____

Vegetation: _____

Substrate: _____

**Perennial or Ephemeral** *(circle one).* If ephemeral, date it goes dry: _____

Seasonal Wetland Swales

Appendix B

## California Red-legged Frog Habitat Site Assessment Data Sheet

**STREAM**:

Bank full width: <2 meters

Depth at bank full: N/A

Stream gradient: <5%

Are there pools (circle one)? YES NO (dry at time of site visit)

If yes,

Size of stream pools: _____

Maximum depth of stream pools: _____

Characterize non-pool habitat: run, riffle, glide, other: _____

Vegetation: observed seasonal wetland swales represent vegetated linear sloping drainages that lack a defined bed and bank. Common species included Mediterranean barley (Hordeum marinum ssp. gussoneanum), curly dock (Rumex crispus), perennial rye grass (Lolium perenne), water cress (Rorippa nasturtium-aquaticum), tall flat sedge (Cyperus eragrostis), and spiny-fruited buttercup (Ranunculus muricatus).

Substrate: _____

Bank description: _____

**Perennial or Ephemeral** *(circle one).* If ephemeral, date it goes dry: Unknown

| Other aquatic habitat characteristics, species observations, drawings, or comments: |
|---|
| Dry at reaches viewed during this 22 April 2013 field visit. Described by Gibson & Skordal (2012) as ephemeral features. |

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs (see Appendix A, photos 16-18)
3. Maps with important habitat features and species location (see Figure 2)

Seasonal Wetland Swales

# Evaluation of Potential California Red-Legged Frog (*Rana aurora draytonii*) Habitat and Presence for the Dixon Ranch Subdivision Project, El Dorado County, California




Prepared by:

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For:

**Dixon Ranch Venture, LLC**
1508 Eureka Road, Suite 235
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**August 25, 2016**

# Evaluation of Potential California Red-Legged Frog (*Rana aurora draytonii*) Habitat and Presence for the Dixon Ranch Subdivision Project, El Dorado County, California

## INTRODUCTION

This report provides results of protocol-level species surveys conducted for the California red-legged frog (*Rana aurora draytonii*) on the Dixon Ranch Subdivision Project site (project site), located south of Green Valley Road in El Dorado County, California. A site visit was conducted for the purpose of assessing habitat suitability on 22 April 2013 and conditions were verified on June 5, 2015. A habitat assessment report was provided to the U.S Fish and Wildlife Service (Service) Forest Foothills Division on May 5, 2015[1]. Site conditions were validated on June 5, 2015. While formal guidance has not yet been provided, prior conversations with Mr. Chris Nagano suggest that presence of suitable habitat relative to regional species records likely warrant species-level surveys for sites in this region. As a proactive step to provide additional information while the Service reviewed the project, protocol species-level (breeding season) surveys were conducted in June of 2015. Although species-level surveys were not initiated in time to complete them in full by June 30, a report of interim findings was prepared on July 18, 2015[2] with the intention of providing results facilitating U.S Fish and Wildlife Service guidance on the project.

As stated in the May 5, 2015 habitat assessment report, the project site contains habitats suitable for California red-legged frogs, possessing both the aquatic and upland terrestrial habitats required by the species; however, the number of reported California red-legged frog occurrences in El Dorado County is low. The suitable habitats on the project site consist of two contiguous pond impoundments situated in the Green Springs

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[1] *Evaluation of Potential California Red-Legged Frog (Rana aurora draytonii) Habitat on the Dixon Ranch Subdivision Project*
*El Dorado County, California* . Prepared by Eric C. Hansen, Consulting Environmental Biologist, 4200 N. Freeway Boulevard, Suite 4, Sacramento, CA 95834. Prepared for Dixon Ranch Partners, LLC, 949 Tuscan Lane, Sacramento, California 95864. September 9, 2013.

2 *Evaluation of Potential California Red-Legged Frog (Rana aurora draytonii) Habitat and Presence for the Dixon Ranch Subdivision Project, El Dorado County, California*. Prepared by Eric C. Hansen, Consulting Environmental Biologist, 4200 N. Freeway Boulevard, Suite 4, Sacramento, CA 95834. Prepared for Dixon Ranch Venture. LLC, 12647 Alcosta Boulevard, Suite 470, San Ramon, CA 94583. July 18, 2015.

Creek corridor totaling approximately 3.8 acres in combined surface area, and the Green Springs Creek corridor. Locator, vicinity, and detail maps are included in Figures 1 and 2.

The methodologies used to complete assessments and surveys are presented below, and maps of regional species distribution are included as figures. Photographs of pertinent features and completed habitat assessment and species-level survey forms are included as Appendices A, B and C, respectively.

FIGURE 1. VICINITY MAP

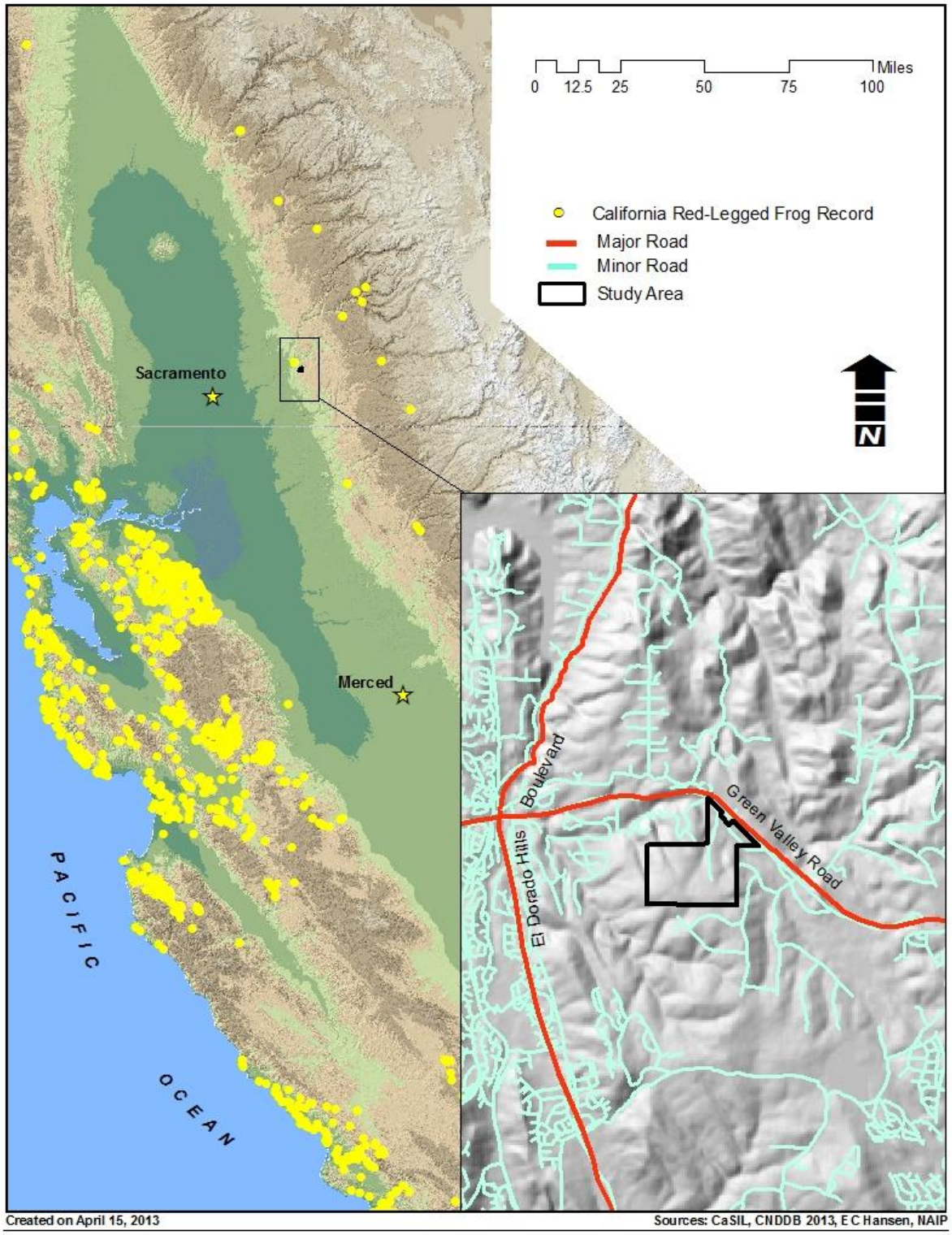
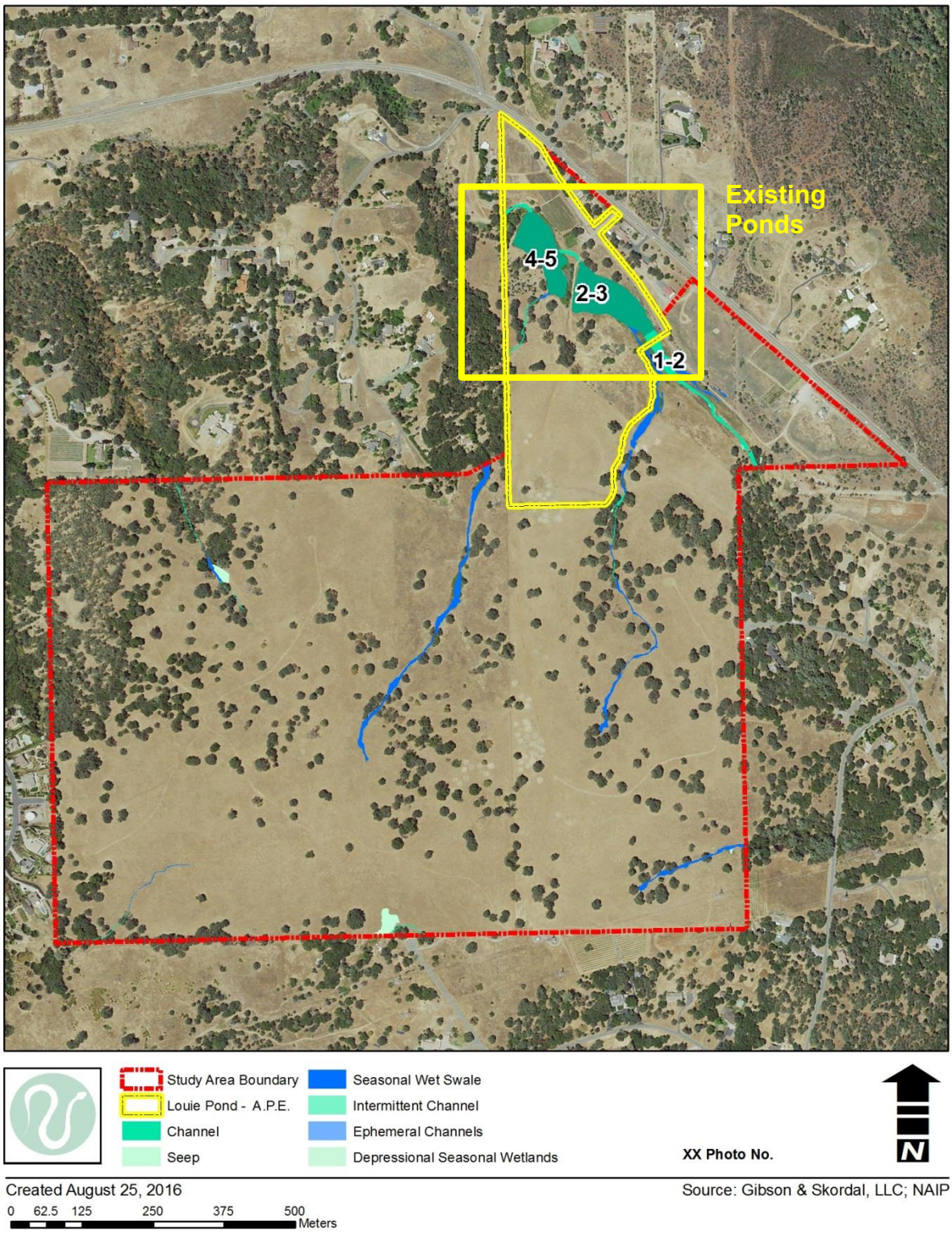


FIGURE 2. STUDY AREA DETAIL AND KEY TO PHOTOGRAPHS



## PROJECT AREA LOCATION, BACKGROUND, AND EXISTING CONDITIONS

Green Springs Creek runs through the project site generally east to west, and the existing ponds on the project site consist of two contiguous impoundments situated in the Green Springs Creek corridor totaling approximately 3.8 acres in combined surface area. The study area is located in Section 24, township 10 North, Range 8 East; Section 19, Township 10 North, Range 9 East, MDB&M, El Dorado County, California. The study area can be found at UTM 670,016 M E; 4,285,698 M N (Zone 10 North) and is portrayed on the Clarksville, California 7.5-Minute Series Topographic Quadrangle. In order to provide an adequate regional perspective, an approximately 301-acre study area established during prior wetland delineations and rare plant species assessments (Gibson & Skordal 2011, 2012) were used to complete the habitat assessment. To access the site from Sacramento, drive east on Highway 50 into El Dorado County and exit to the north onto El Dorado Hills Boulevard, travel north on El Dorado Hills Boulevard, and then turn right onto Green Valley Road. Continue east on Green Valley Road until reaching West Green Springs Drive. The study area is located southeast of the West Green Springs Drive-Green Valley Road intersection.

## PROPOSED ACTION

The Dixon Ranch project proposes to subdivide 280+/- acres into 444 single family detached residential units, 160 age-restricted single family detached units (age restricted to older adults), and includes retention of one existing single family residence for a total of 604 new units and one existing unit. The project includes preservation or creation of 84.1+/- acres (30%) of open space including parks, trails, landscaped lots, and native open spaces. The project includes on-site and off-site infrastructure to serve the development. Construction of a clubhouse for the age-restricted units is also proposed. Build-out will likely occur over many years, but ultimately will be dictated by market demands.

Required project approvals include: a General Plan Amendment (File No. A11-0006); Zone Change (File No. Z11-0008); Planned Development (File No. PD11-0006); Tentative Map (File No. TM11-1505); annexation into the El Dorado Irrigation District; annexation into the El Dorado Hills Community Service District; and annexation into the El Dorado Hills County Water District (El Dorado Hills Fire Department).

### *General Plan Amendment Description*

The project is currently located entirely within the General Plan Community Region (urban limit line) of El Dorado Hills and is designated as Low Density Residential (LDR) land use, with the exception of 1.5+/- acres at the southeast corner of the property that is designated as Open Space (OS) and associated with the existing SMUD power transmission corridor. LDR allows for a maximum density of 1 dwelling unit per 5 acres.

The proposed project is applying for a change in the land use designations on the site to High Density Residential (HDR) allowing for a density range of 1 to 5 units per acre; Medium Density Residential (MDR) allowing for a maximum of 1 dwelling unit per acre; and Open Space (OS). The proposed project is retaining the existing Low Density Residential (LDR) land use designation for the existing residence to remain.

***Planned Development Description***

The project is a planned development.

Proposed uses within the project are as follows:

1) 444 single family detached residential units with lot sizes ranging from 5,775 sf to 3.32 ac

| Product Type | Qty | Land Use |
|---|---|---|
| Village Small Lot | 149 | HDR |
| Village Large Lot | 173 | HDR |
| Hillside | 54 | HDR |
| Hillside Custom | 58 | HDR |
| Estate Residential | 5 | MDR |
| Estate Residential Large Lot | 5 | MDR |
| | 444 | |

2) 160 age-restricted single family detached residential units with lot sizes ranging from 4,725 sf to 12,685 sf

| Product Type | Qty | Land Use |
|---|---|---|
| Age-Restricted Small Lot | 80 | HDR |
| Age-Restricted Large Lot | 80 | HDR |
| | 160 | |

3) One existing Low Density Residential (LDR) unit to remain.
4) One Clubhouse lot (Lot C)
5) One EID lot for a proposed pump station
6) Public and private roadways
7) 84.1+/- acres or 30% total open space, including native open space, parks and landscape lots.
    a. Includes 11.14 acres of Parks including:
        - One Village Park (Lot A)
        - One Neighborhood Park (Lot B)

***Lighting***

Outdoor lighting in conformance with Section 17.14.170 of the County Ordinance Code is anticipated to be provided at major intersections, mid-block pedestrian crossings, along sag vertical curves where needed to establish adequate sight distance and as appropriate for public safety. Limited safety and security lighting and indirect shielded lighting will also be provided at park sites, gates and clubhouse including but not limited to parking areas, play areas, and walkways where appropriate. The project does not propose to use lighted ball fields or other light intensive uses at the proposed park sites.

**Existing Field Conditions**

The project site is situated in the foothills of the Sierra Nevada on rolling to relatively flat terrain at an average elevation of about 1,050 feet. The project site, which is primarily used as pasturage, is undeveloped and contains no habitable structures. Newer residential developments are located to the west while older ranchettes occupy lands to the north and east. The area in general is in the process of converting from rural to residential land use. The site was very lightly grazed by cattle and horses at the time of field surveys.

The majority of the site generally drains to the north/northeast into Green Spring Creek. Green Spring Creek, which traverses the northern portion of the study area from east to west, is tributary to Folsom Reservoir by way of New York Creek. The southwestern corner of the parcel appears to drain to the south towards Allegheny Creek which is located outside of the study area boundary. Allegheny Creek is also tributary to Folsom Reservoir by way of Green Spring Creek and New York Creek, respectively.

Based on records received from the State Water Resources Control Board, the ponds are believed to have been constructed around 1966. Both ponds are manmade and are separated by an earthen embankment with a small bridge/spillway. This embankment currently provides property access and is to be reconstructed in a manner that will continue to provide adequate property access, as appropriate, in conformance with applicable regulations.

Green Springs Creek originates approximately 1/3 of a mile upstream from the project site and generally flows in a northwesterly direction. The catchment area contributing to the lower of the two ponds is approximately 1800 acres. The storage amount is proposed to remain the same with current water rights allowing for storage of approximately 27 AC-FT combined between the two ponds. The normal pond water surface elevation (spillway crest elevation) for the lower pond is to remain at approximately elevation 972 feet (NAD83 datum). Though currently controlled by a vegetated / rock lined bypass, proposed improvements will consist of a spillway with appropriate erosion control and energy dissipation.

The upper pond water surface elevation is currently controlled by flash boards placed along the face of the existing bridge structure during summer months. At approximate top of flashboard elevations, the normal upper pond water surface elevation is set to approximately elevation 982 feet (NAD83 datum) during summer months. This elevation will become the new effective year-round permanent crest elevation for the upper pond as part of the proposed project

## FIELD SURVEY METHODS

Field surveys were conducted in June of 2015 according to U.S. Fish and Wildlife Service guidelines (April 4, 1997 Memorandum 1-1-97-TA-1093 Dissemination of Interim Guidance on Site Assessment and Field Surveys for California Red-Legged Frogs; August 2005 Revised Guidance on Site Assessment and Field Surveys for California Red-Legged Frogs). This Guidance recommends a total of up to eight (8) surveys to determine the presence of California Red-legged Frogs at or near a project site. Two (2) day surveys and four (4) night surveys are recommended during the breeding season; one (1) day and one (1) night survey is recommended during the non-breeding season. Each survey must take place at least seven (7) days apart. At least one survey must be conducted prior to August 15th. The survey period must be over a minimum period of 6 weeks (i.e., the time between the first and last survey must be at least 6 weeks). Throughout the species' range, the non-breeding season is defined as between July 1 and September 30.

This guidance requires that in assessing the presence of California red-legged frogs (CRF) at a given locale, the following steps and conditions are completed or met:

1. Upon arrival at the survey site, surveyors should listen for a few minutes for frogs calling, prior to disturbing the survey site by walking or looking for eye shine using bright lights. If CRF calls are identified, the surveyor should note this information on the survey data sheet and note the approximate location of the call. Once the survey begins, the surveyor should pay special attention to the area where the call originated in an attempt to visually identify the frog.

2. The most common method of surveying for CRF is the visual-encounter survey. This survey is conducted either during daylight hours or at night by walking entirely around the pond or marsh or along the entire length of a creek or stream while repeatedly scanning for frogs. This procedure allows one to scan each section of shore from at least two different angles. Surveyors should begin by first working along the entire shoreline, then by entering the water (if necessary and no egg masses would be crushed or disturbed), and visually scanning all shoreline areas and all aquatic habitats identified in the site assessment. Generally, surveyors shall focus on all open water to at least 2 meters (6.5 feet) up the bank. When wading, surveyors must take maximum care to avoid disturbing sediments, vegetation, or larvae. When walking on the bank, surveyors

shall take care to not crush rootballs, overhanging banks, and stream-side vegetation that might provide shelter for frogs. Surveys must cover the entire area, otherwise the remaining survey area must be surveyed the next day/night that weather conditions allow (both visits would constitute one day/night survey).

3. Day surveys may be conducted on the same day as a night survey. The main purpose of day surveys during the breeding season is to look for larvae, metamorphs, and egg masses; the main purpose of day surveys during the non-breeding season is to look for metamorphosing sub-adults, and non-breeding adults. Daytime surveys shall be conducted between one hour after sunrise and one hour before sunset.

4. The main purpose of night surveys is to identify and locate adult and metamorphosed frogs. Conditions and requirements for conducting night surveys are as follows:

    A. Night surveys must commence no earlier than one (1) hour after sunset.
    B. Due to diminished visibility, surveys should not be conducted during heavy rains, fog, or other conditions that impair the surveyor's ability to accurately locate and identify frogs.
    C. Nighttime surveys shall be conducted with a Service-approved light such as a Wheat Lamp, Nite Light, or sealed-beam light that produces less than 100,000 candle watt. Lights that the Service does not accept for surveys are lights that are either too dim or too bright. For example, Mag-Light-type lights and other types of flashlights that rely on 2 or 4 AA's/AAA's, 2 C's or 2 D batteries. Lights with 100,000 candle watt or greater are too bright and also would not meet Service requirements.
    D. The Service approved light must be held at the surveyor's eye level so that the frog's eye shine is visible to the surveyor.
    E. The use of binoculars is a must in order to effectively see the eye shine of the frogs. Surveys conducted without the use of binoculars may call in to question the validity of the survey.

5. Weather and visibility conditions must be consistent throughout the duration of the survey; if weather conditions become unsuitable, the survey must be completed at another time when conditions are better suited to positively locating and identifying frogs. Suitable conditions are as follows:

    A. Air temperature at the survey site must be at least 10 degrees Celsius (50 degrees Fahrenheit). Frogs are less likely to be active when temperatures are below 10 degrees Celsius (50 degrees Fahrenheit).
    B. Wind speed must not exceed 8 kilometers/hour (5 miles/hour) at the survey site. High wind speeds affect temperatures and the surveyor's ability to hear frogs calling.

C. Surveys must be conducted under clear to partly cloudy skies (high clouds are okay) but not under dense fog or during heavy rain, as stated above. Surveys may be conducted during light rains.

6. In an effort to minimize the spread of terrestrial and aquatic pathogens, all aquatic survey equipment including chest waders, wet suits, float tubes, kayaks, shall be decontaminated before entering potential CRF habitat using the guidelines in Appendix B. Careful attention shall be taken to remove all dirt from boots, chest waders, wetsuits, float tubes, kayaks, and other equipment before placing equipment into the water.

7. If the larval life stage is the only life stage detected and the larvae are not identified to species (or similarly, if sub-adult or adult frogs are observed but not identified to species), the surveyor must either return to the habitat to identify the frog in another life stage or obtain the appropriate permit (e.g., section 10(a)(1)(A) permit) authorization allowing the surveyor to handle CRF and larvae. In order for the Service to consider a survey to be complete, all frogs encountered must be accurately identified.

## RESULTS

In total, three (3) days and five (5) night surveys were completed between May 2 and July 13, 2016. Unlike the unsuitable drought conditions experienced during 2015, Green Springs Creek flowed continuously during the 2016 breeding season, enabling the completion of all surveys according to protocol. Sierran treefrog (*Pseudacris sierra*), American Bull Frog (*Lithobates catesbeianus*) and Western Toad (*Anaxyrus boreas*) were observed at all sites, but the upper (eastern) pond possessed a higher concentration of amphibian observations than the lower (western) pond. Only American bullfrogs were detected in the lower pond.

Green Springs Creek remained dry during the non-breeding season surveys (post-June 30). As with breeding-season surveys, there were more observations of Sierran treefrogs, American Bullfrogs, and Western toads at the upper pond compared to the lower pond. Large brambles of Himalayan Blackberry (*Rubus discolor*) made difficult to access both sides of the pond as well as large patches of hardstem bulrush (*Schoenoplectus acutus*) at both upper and lower ponds. During the non-breeding survey the bulrush on the lower site were grazed by cattle during the non-breeding survey period, potentially limiting habitat but increasing visibility during surveys.

As in previous years, no California red-legged frogs were detected at any time during the breeding- and non-breeding seasons. American bullfrogs were observed at all sites. Centrarchid fishes (*Lepomis* spp.) were only observed in the larger, lower pond. There were small minnow (unknown spp) observed in the smaller, upper pond. All of these

species may compete with and prey upon California red-legged frogs. Other potential predators included great blue herons (*Ardea herodias*), green-backed heron (*Butorides virescens*), pied-billed grebe (*Podilymbus podiceps*), North American raccoon (*Procyon lotor*), Valley garter snake (*Thamnophis sirtalis fitchi*) and Northern Pacific pond turtle (*Actinemys marmorata*). Larval Sierran treefrogs and Western toads were also observed, but neither are known to adversely affect California red-legged frogs
Full survey results are provided in Appendix B.

## SUMMARY

Permanent, suitable red-legged frog habitat is present on the project site within Green Springs Creek and the associated impoundments. Although drainage features on-site are characterized as ephemeral or intermittent, they also provide potential habitat for dispersing California red-legged frogs when they are flowing or when they possess pooled water following winter and spring rains. Although no California red-legged frogs were observed during the field surveys, there is ample supporting habitat on the project site.

The regional presence of California red-legged frogs remains unverified. A juvenile (unverified) California red-legged frog was reported in 2005 within 2.8 miles (4.5 km) of the Proposed Project from a drainage at the end of Fitch Way, on the east side of Folsom Lake, southwest of Iron Mountain and north of Highway 50 (CNDDB 2016), but no others are reported from the immediate vicinity. California red-legged frogs have been verified in recent years in El Dorado County in Weber Creek, near Placerville (early 1990s) (Miriam Green Associates 1996, CNDDB 2016), in Northeastern El Dorado County near Georgetown, and in Placer County near Michigan Bluff, but no verified populations are reported within 17.7 miles (28.5 km) of the project site. With the exception of the unverified juvenile frog reported near Folsom Lake, all California red-legged frogs recorded in this region of the Sierra Nevada occur above 2,000 feet, well above the approximately 1,050-foot mean elevation of the project site.

Predatory species such as American bullfrogs that may compete with or prey upon California red-legged frogs are present on the project site, further reducing the likelihood that California red-legged frogs persist in the area (Doubledee et al. 2003, Lawler et al. 1999, USFWS 2002). However, winter and spring flooding as well as periodic summer dry down within aquatic features may limit the density of these predators without limiting California red-legged frogs (Doubledee et al. 2003), and differing spatial distribution between red-legged frogs and potential predators may allow red-legged frogs to persist if present (Cook and Currylow 2014).

Though negative survey results do not provide definitive evidence of species absence, the lack of observations across multiple years of protocol-level surveys combined with the factors stated above suggests that California red-legged frogs probably do not occur here.

## REFERENCES

California Natural Diversity Database (CNDDB). Commercial Version, August 2016. Geographic Information Systems (GIS) data and computer printout of sensitive species records in California. California Department of Fish and Game, Natural Heritage Division, Sacramento, CA.

Cook, D.G. and A.F. Currylow. 2014. Seasonal Spatial Patterns of Two Sympatric Frogs: California Red-Legged Frog and American Bullfrog. Western Wildlife 1:1-7.

Doubledee, R. A., E. B. Muller, and R. M. Nisbet. 2003. Bullfrogs, disturbance regimes, and the persistence of California red-legged frogs. Journal of Wildlife Management 67, 424–438.

Lawler, S.P., D. Dritz, T. Strange, and M. Holyoak. 1999. Effects of introduced mosquitofish and bullfrogs on the threatened California red-legged frog. Conservation Biology 13(3):613:622.

Rathbun, G.B., M.R. Jennings, T.G. Murphey, and N.R. Siepel. 1993. Status and ecology of sensitive aquatic vertebrates in lower San Simeon and Pico Creeks, San Luis Obispo County, California. U.S. Fish and Wildlife Service, National Ecology Research Center, San Simeon, CA. Prepared for the California Department of Parks and Recreation. 103 pp.

# Appendix A: Photographs



Green Spring creek, breeding season



Green Springs Creek, non-breeding season



Upper Louie Pond, breeding season



Upper Louie Pond, non-breeding season



Lower Louie Pond (E end)



Lower Louie Pond (W end)

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

Survey results reviewed by _____ (FWS Field Office) _____ (date) _____ (biologist)

Date of Survey: 05/02/2016 (mm/dd/yyyy) Survey Biologist: Johnson (Last name) Adam (first name)

Survey Biologist: _____ (Last name) _____ (first name)

Site Location: 670105 / 4286498
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

**ATTACH A MAP (include habitat types, important features, and species locations)**

Proposed project name: Dixon Ranch / Louie pond
Brief description of proposed action:

Type of Survey (circle one): DAY (NIGHT) (BREEDING) NON-BREEDING

Survey number (circle one): (1) 2 3 4 5 6 7 8

Begin Time: 2108 End Time: 2211

Cloud cover: 0% Precipitation: 0%

Air Temperature: 17.3 Water Temperature: 21.1

Wind Speed: 0-1 mph Visibility Conditions: Excellent

Moon phase: Waning Crescent Humidity: 43%

Description of weather conditions: cool, calm, clear sky

Brand name and model of light used to conduct surveys: Nite lite

Were binoculars used for the surveys (circle one)? (YES) NO
Brand, model, and power of binoculars: Nikon, Action 8x40

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**AMPHIBIAN OBSERVATIONS**

| | Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification |
|---|---|---|---|---|---|---|
| seasonal creek | Sierran Chorus frog | >10 | H | Adults | lg | 100% |
| | Bullfrog | 1 | H | Adults | lg | 100% |
| ponds | Sierran Chorus frog | >10 | H | Adults | lg | 100 % |
| | Bull frogs | 3 | O | Adults | med/lg | 100% |
| | Sierran Chorus frog | 7 | O | Adult | lg | 100% |
| | Bull frog | | H | Adult | lg | 100% |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: Bull frog throughout property Mosquito fish and Centrarchid in the shallows of waters of the ponds.

Other notes, observations, comments, *etc.* I observed no Tadpoles in the ponds. I only observed Tadpoles in the seasonal creek. The Chorus & Bull frogs were calling in the ponds, but no eggs observed, maybe next visit I will see some Tadpoles.

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs
3. Maps with important habitat features and species locations

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

Survey results reviewed by _____ (FWS Field Office) _____ (date) _____ (biologist)

Date of Survey: 05/02/2016 (mm/dd/yyyy) Survey Biologist: Johnson (Last name) Adam (first name)

Survey Biologist: _____ (Last name) _____ (first name)

Site Location: 670105 / 4286498
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

**ATTACH A MAP (include habitat types, important features, and species locations)**

Proposed project name: Dixon Ranch / Louie pond
Brief description of proposed action:

Type of Survey (circle one): (DAY) NIGHT (BREEDING) NON-BREEDING

Survey number (circle one): (1) 2 3 4 5 6 7 8

Begin Time: 1743 End Time: 1856

Cloud cover: 10% Precipitation: 0%

Air Temperature: 25.5 Water Temperature: 24.1

Wind Speed: 0-1 mph Visibility Conditions: Excellent

Moon phase: Waning Crescent Humidity: 27%

Description of weather conditions: High thin clouds

Brand name and model of light used to conduct surveys: N/A

Were binoculars used for the surveys (circle one)? (YES) NO
Brand, model, and power of binoculars: Nikon, Action 8x40 B.2

# Appendix B: Field Survey Forms

Louie pond Day 1
5/2/16

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**AMPHIBIAN OBSERVATIONS**

| Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification |
|---|---|---|---|---|---|
| Bullfrog | 3 | H | Adult | Lg | 100% |
| Sierran Chorusfrog | >200 | O | larvae | sm-Med | 99% |
| Western Toad | >50 | O | larvae | sm | 99% |
| | | | | | |
| | | | | | |
| | | | | | |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: A pair of Pied-Billed Grebes, Bullfrog, Centrarchid (green sunfish), 4 mosquito fish, 2 Western Pond turtle, 1 in the seasonal creek, the 2nd was in the upper pond

Other notes, observations, comments, *etc.* All the larvae observed was in the seasonal creek were the water was slow with pools.
photo #11, looking @ pools in the seasonal creek.
photo #12 looking downstream, from end of property.
photo #13 looking @ upper pond
photo #14 " " lower pond
Tules are the dominant Vegetation @ both ponds
upper ~75% cover, lower ~90% cover

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs
3. Maps with important habitat features and species locations

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

Survey results reviewed by _____
(FWS Field Office) (date) (biologist)

Date of Survey: 05/18/2016 (mm/dd/yyyy) Survey Biologist: Johnson (Last name) Adam (first name)

Survey Biologist: _____ (Last name) _____ (first name)

Site Location: _____
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

**ATTACH A MAP (include habitat types, important features, and species locations)**

Proposed project name: Dixon Ranch, Lovie Ponds
Brief description of proposed action:

Type of Survey (circle one) (DAY) NIGHT (BREEDING) NON-BREEDING

Survey number (circle one): 1 (2) 3 4 5 6 7 8

Begin Time: 1727 End Time: 1850

Cloud cover: 0% Precipitation: 0%

Air Temperature: 33.2 Water Temperature: Upper pond 27.7, Lower pond 26.8, Seasonal Creek 29.4

Wind Speed: 2-5mph Visibility Conditions: Excellent

Moon phase: Waxing Gibbous Humidity: 27%

Description of weather conditions: Calm, Sunny with wind from the South west

Brand name and model of light used to conduct surveys: N/A

Were binoculars used for the surveys (circle one)? (YES) NO
Brand, model, and power of binoculars: Nikon 8x40 8.2°

Upper pond
2nd Day 5/10

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**AMPHIBIAN OBSERVATIONS**

| Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification |
|---|---|---|---|---|---|
| Bullfrog | 4 | H | Adult | med/lg | 100% |
| Western Toad | 1 | O | Sub Adult | med | 100% |
| Chorus frog | 28 | O | Sub Adult | med/lg | 100% |
| Chorus frog | +100 | O | larvae | sm - lg | 100% |
| Chorus frog | +30 | O | metamorphosis | lg | 100% |
| | | | | | |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: Bullfrog, Western Pond turtle, Great Blue Heron, Pied-Billed Grebe, Belted kingfisher, Sunfish sp. and Garter snake sp.

Other notes, observations, comments, *etc.* upper pond and seasonal creek has the highest numbers of chorus frog in all life stages as well as western toad. Both pond have Bullfrogs and fish, but the lower pond has larger predatory fish

The water in seasonal creek has dropped about 2 inches. Both ponds water level is stable.

Photo #28 showing H2O levels of seasonal creek.

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs
3. Maps with important habitat features and species locations

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

Survey results reviewed by _____ (FWS Field Office) _____ (date) _____ (biologist)

Date of Survey: 05/18/2016 (mm/dd/yyyy) Survey Biologist: Johnson (Last name) Adam (first name)

Survey Biologist: _____ (Last name) _____ (first name)

Site Location: _____
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

**ATTACH A MAP (include habitat types, important features, and species locations)**

Proposed project name: Dixon Ranch, Lower Pond
Brief description of proposed action:

Type of Survey (circle one): DAY (NIGHT) (BREEDING) NON-BREEDING

Survey number (circle one): 1 (2) 3 4 5 6 7 8

Begin Time: 2124 End Time: 2240

Cloud cover: 10% Precipitation: 0%

Air Temperature: 16.8 Water Temperature: upper pond 23.9 lower pond 23.1 Seasonal Creek 21.1

Wind Speed: 2mph Visibility Conditions: Excellent

Moon phase: Waxing Gibbous Humidity: 40%

Description of weather conditions: Clear, calm, wind from southwest

Brand name and model of light used to conduct surveys: Nitelite

Were binoculars used for the surveys (circle one)? (YES) NO
Brand, model, and power of binoculars: Nikon 8x40

# Appendix B: Field Survey Forms

Lovie Pond
Nile 5/19

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**AMPHIBIAN OBSERVATIONS**

| Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification |
|---|---|---|---|---|---|
| Bull frog | 6 | H | Adult | Lg | 100% |
| Chorus frog | 14 | H | Adult | Lg | 100% |
| Chorus frog | 8 | O | Sub Adult | med-lg | 100% |
| Chorus frog | 4200 | O | Larvae | sm-lg | 100% |
| | | | | | |
| | | | | | |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: Bullfrog and sunfish in lower pond.

Other notes, observations, comments, *etc.* Bull frogs are located in the upper and lower ponds, but the chorus frogs are located at the upper pond and seasonal creek only. No Tadpoles observed in the lower pond. Minnows observed in the upper pond, where as the lower pond has sunfish & mosquito fish

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs
3. Maps with important habitat features and species locations

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

Survey results reviewed by _____ (FWS Field Office) _____ (date) _____ (biologist)

Date of Survey: 06/07/2016 (mm/dd/yyyy) Survey Biologist: Johnson (Last name) Adam (first name)

Survey Biologist: _____ (Last name) _____ (first name)

Site Location: _____
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

**ATTACH A MAP (include habitat types, important features, and species locations)**

Proposed project name: Louie Ponds
Brief description of proposed action:

Type of Survey (circle one): DAY (NIGHT) (BREEDING) NON-BREEDING

Survey number (circle one): 1 2 (3) 4 5 6 7 8

Begin Time: 2131 End Time: 2248

Cloud cover: 0% Precipitation: 0%

Air Temperature: 19.0 °C Water Temperature: upper 24.6 Lower 25.5

Wind Speed: 0-2mph Visibility Conditions: Excellent

Moon phase: Waxing Crescent Humidity: 43%

Description of weather conditions: Clear sky, calm with a wind from the SSW

Brand name and model of light used to conduct surveys: Nite lite

Were binoculars used for the surveys (circle one)? (YES) NO
Brand, model, and power of binoculars: Nikon 8x40

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**AMPHIBIAN OBSERVATIONS**

| Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification |
|---|---|---|---|---|---|
| Bullfrog | 4 | H | Adult | med-lg | 100% |
| Bullfrog | 6 | O | Adult | sm-lg | 100% |
| Chorus frog | 3 | H | Adult | lg | 100% |
| Chorus frog | >100 | O | sub Adult | sm-med | 100% |
| Chorus frog | 19 | O | Larvae | med-lg | 100% |
| Western Toad | 23 | O | sub Adult | sm-med | 100% |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: Bull frog, Centrarchid

Other notes, observations, comments, *etc.* Water is down from last ~~vis~~ visit. The creek has no flow, only small pools remain Chorus frogs (larvae & subAdult) were observed, with 2 sub Adult Bull frog. The water at the upper pond has dropped no flow between upper & lower ponds. Around the upper site subAdult Chorus ~~frog~~ in number hard to count so many. I only heard 1 Adult Bull frog at ~~the~~ the lower site. Fishing bait cans are at the lower site, may be Bass in that pond. All other frog observations were at the upper pond.

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs
3. Maps with important habitat features and species locations

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

Survey results reviewed by _____ (FWS Field Office) _____ (date) _____ (biologist)

Date of Survey: 6/29/2016 (mm/dd/yyyy)

Survey Biologist: Johnson (Last name) Adam (first name)

Survey Biologist: _____ (Last name) _____ (first name)

Site Location: _____
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

**ATTACH A MAP (include habitat types, important features, and species locations)**

Proposed project name: Lovie Ponds
Brief description of proposed action:

Type of Survey (circle one): DAY (NIGHT)

BREEDING NON-BREEDING

Survey number (circle one): 1 2 3 (4) 5 6 7 8

Begin Time: 2141 End Time: 2236

Cloud cover: 0% Precipitation: 0%

Air Temperature: 22.2 Water Temperature: _____

Wind Speed: 0-1 mph Visibility Conditions: Excellent

Moon phase: Waning Crescent Humidity: 35%

Description of weather conditions: clear & calm

Brand name and model of light used to conduct surveys: Nite Lite

Were binoculars used for the surveys (circle one)? (YES) NO

Brand, model, and power of binoculars: Nikon 8X40

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**AMPHIBIAN OBSERVATIONS**

| Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification |
|---|---|---|---|---|---|
| Bull frog | ~~#~~3 | H | Adult | Lg | 100% |
| Western Toad | 8 | O | subAdult | med-lg | 100% |
| Sierran Chorus frog | 29 | O | subAdult | med-lg | 100% |
| Bull frog | 11 | O | Adult | med-lg | 100% |
| | | | | | |
| | | | | | |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: Centrarchid in the lower pond.

Other notes, observations, comments, *etc.* Seasonal creek is dry, no pools remain. Water is down ~6" at both pond. The tules & cattails along the shore have been grazed. It makes it easy to see more of the pond. All frogs observed and Heard were located at the upper pond. I did observed a WPT (western pond turtle) at the lower pond.

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs
3. Maps with important habitat features and species locations

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

Survey results reviewed by _____
(FWS Field Office) (date) (biologist)

**Date of Survey:** 07/13/2016 (mm/dd/yyyy) **Survey Biologist:** Johnson (Last name) Adam (first name)

**Survey Biologist:** _____ (Last name) _____ (first name)

**Site Location:** _____
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: Levee Ponds
Brief description of proposed action:

**Type of Survey** (circle one): (DAY) NIGHT BREEDING (NON-BREEDING)

**Survey number** (circle one): (1) 2 3 4 5 6 7 8

**Begin Time:** 1835 **End Time:** 1942

**Cloud cover:** 0% **Precipitation:** 0%

**Air Temperature:** 29.9°C **Water Temperature:** upper 29.9°C lower 28.4°C

**Wind Speed:** 1-3mph **Visibility Conditions:** Excellent

**Moon phase:** Waxing Gibbous **Humidity:** 26%

**Description of weather conditions:** Sunny, wind from west

**Brand name and model of light used to conduct surveys:** N/A

**Were binoculars used for the surveys** (circle one)? (YES) NO
**Brand, model, and power of binoculars:** Nikon 8x40

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**AMPHIBIAN OBSERVATIONS**

| Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification |
|---|---|---|---|---|---|
| Sierran Chorus frog | 57 | O | Adult | sm-med | 100% |
| Weston Toad | 9 | O | Adult | Sm | 100% |
| Bull frog | ~~1~~ | H | Adult | lg | 100% |
| | | | | | |
| | | | | | |
| | | | | | |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: Bull frog, Garter Snake (T. sirtalis), Centrarchid, Western pond turtle, Great Egert and Greenback heron.

Other notes, observations, comments, *etc.* Seasonal creek dry, and no flow between ponds, Most of the frog were observed in or around the upper pond. Did observed for the first time Chorus frogs around the lower pond. In the lower pond, 5 Western Pond turtles observed. Top water feeding by Centrarchid fish was observed as well.

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs
3. Maps with important habitat features and species locations

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

Survey results reviewed by _____
(FWS Field Office) (date) (biologist)

Date of Survey: 07/13/2016 (mm/dd/yyyy) Survey Biologist: Johnson (Last name) Adam (first name)

Survey Biologist: _____ (Last name) _____ (first name)

Site Location: _____
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

**ATTACH A MAP (include habitat types, important features, and species locations)**

Proposed project name: Louie Ponds
Brief description of proposed action:

Type of Survey (circle one): DAY (NIGHT) BREEDING (NON-BREEDING)

Survey number (circle one): (1) 2 3 4 5 6 7 8

Begin Time: 2141 End Time: 2252

Cloud cover: 0% Precipitation: 0%

Air Temperature: 26.3 Water Temperature: upper = 24.4°C lower = 25.9°C

Wind Speed: 0-1 mph Visibility Conditions: Excellent

Moon phase: Waxing Gibbous Humidity: 25%

Description of weather conditions: Clear, calm

Brand name and model of light used to conduct surveys: Night Hide

Were binoculars used for the surveys (circle one)? (YES) NO
Brand, model, and power of binoculars: Nikon 8 x 42

# Appendix B: Field Survey Forms

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**AMPHIBIAN OBSERVATIONS**

| Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification |
|---|---|---|---|---|---|
| Bull frog | 4 | H | Adult | Lg | 100% |
| Bull frog | 12 | O | Adult | sm-lg | 100% |
| Chorus frog | 34 | O | Adult | sm-md | 100% |
| Western Toad | 1 | O | Adult | sm | 100% |
| Bull frog | 9 | O | Larvae | Lg | 100% |
| | | | | | |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: Bullfrog, centrarchid (Blue-gill)

Other notes, observations, comments, *etc.* The lower pond is where I observed the Bull frog tadpoles, and 2 of 12 Bull frog Adult.
By the end of summer the upper pond maybe dry where as the lower pond is deeper and will hold it's water longer.

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs
3. Maps with important habitat features and species locations

# Appendix C: Surveyor Qualifications

## ADAM L. JOHNSON, STAFF BIOLOGIST

**Eric C. Hansen, Consulting Environmental Biologist**

**2001-Present**

### Education

**B.S. in Wildlife Management,** Humboldt State University, Arcata, CA 2003
Concentrations: Wildlife Management with minor in Environmental Resources

### Licenses/Registration

Included on List of Authorized Individuals on Eric C. Hansen's

US FISH AND WILDLIFE SERVICE RECOVERY PERMIT: ESA10(a)(1)(A) - TE-018177-6

DEPARTMENT OF FISH AND GAME SCIENTIFIC COLLECTING PERMIT - 006309

### Professional Summary

Adam Johnson is a senior staff biologist for Eric C. Hansen, Consulting Environmental Biologist. In this capacity, Mr. Johnson has conducted biological monitoring and field research, including visual encounter, trapping, and radio telemetry surveys, for the state- and federally-listed (Threatened) giant garter snake, and has conducted sampling for an abundance of wildlife species throughout California's Central Valley. Mr. Johnson has also conducted biological compliance monitoring on a multitude of projects, including pre-construction and on-site monitoring and administering environmental awareness training to construction personnel.

### Professional Training

**California Tiger Salamander Workshop--Special Emphasis on Sampling/Surveying Upland Habitats, Carmel Valley, CA, June, 2010** - Sponsored by the Elkhorn Slough Coastal Training Program, administered by Dr. Pete Trenham

**California Red-Legged Frog Workshop, April 2010** - Sponsored by the Elkhorn Slough Coastal Training Program, administered by Galen Rathbun and Norman Scott

**California Tiger Salamander Workshop, Watsonville, CA, March, 2010** - Sponsored by the Elkhorn Slough Coastal Training Program, Administered by Dr. Pete Trenham

**Rare Pond Species Survey Techniques Workshop, Rohnert Park, CA, March, 2008** - Sponsored by the Leguna de Santa Rosa Foundation and The Wildlife Project, administered by Dr. Jeff Alvarez and Dr. David Cook

**California Tiger Salamander Workshop--Special Emphasis on Sampling/Surveying Upland Habitats, Carmel Valley, CA, June, 2010** - Sponsored by the Elkhorn Slough Coastal Training Program, administered by Dr. Pete Trenham

### Sample Experience:

**Kinder Morgan Energy Partners – Pipeline Anomaly Inspection and Repair Projects, Contra Costa, Sacramento, San Joaquin, and Yolo Counties, CA.** Conducted biological monitoring on multiple underground pipeline inspection/repair projects throughout the Central Valley of California. Conducted pre-construction surveys and on-site monitoring for giant garter snake, Swainson's Hawk, Burrowing Owl, and western pond turtle. 2006 - Present.

**Biological Effectiveness Monitoring for the Natomas Basin Habitat Conservation Plan Area.** Served as staff biologist for giant garter snake population surveys (trapping and visual encounter) conducted in the Natomas Basin. Conducted field surveys independently and assisted in the supervision/coordination of seasonal field research technicians. 2004 - 2010.

# Attachment H

**Special-Status Plant Survey Report**



# Special-Status Plant Survey Report

## Generations at Green Valley

El Dorado County
October 2022

MADRONE ECOLOGICAL CONSULTING

**Prepared for:**
Green Valley Road Benefits, LLC
110 Blue Ravine Road, Suite 209
Folsom, California 95630

**Recommended Citation:**
Madrone Ecological Consulting, LLC (Madrone). 2022. *Special-Status Plant Survey Report for Generations at Green Valley*. Prepared for Green Valley Road Benefits, LLC. Published on 18 October 2022.

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Attachment A: Botanist Qualifications
Attachment B: Target Plant Species Reference Population Information
Attachment C: Plant Species Observed within the Generations at Green Valley Study Area

## 1.0 INTRODUCTION

This report presents the results of a special-status plant survey conducted for the approximately 301-acre Generations at Green Valley Study Area. The Study Area is located generally along and south of Green Valley Road in unincorporated El Dorado County, California. The Study Area is located within portions of Section 19, Township 10 North, Range 9 East (MDB&M) and Section 24, Township 10 North, Range 8 East of the "Clarksville, California" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2018) (**Figure 1**).

## 2.0 METHODOLOGY

Madrone Ecological Consulting, LLC (Madrone) botanist Daria Snider conducted protocol-level rare plant surveys of the Study Area on 26 April, 7 May, and 9 June 2021 in accordance with the *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants* (USFWS 2000), the *Botanical Survey Guidelines of the California Native Plant Society* (CNPS 2001), and *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018).

A list of special-status plant species with potential to occur within the Study Area was developed by reviewing the following:

- the California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (CNPS 2021) query of CRPR Lists 1A, 1B, 2A, 2B, and 3 within the "Clarksville, California" USGS topo quadrangle, and the eight surrounding quadrangles; and
- the California Natural Diversity Database occurrences of special-status plant species within 5 miles of the Study Area (CNDDB 2021).

The target species for this survey were:

- Jepson's onion (*Allium jepsonii*)
- Big-scale balsamroot (*Balsamorhiza macrolepis*)
- Stebbin's morning glory (*Calystegia stebbinsii*)
- Chaparral sedge (*Carex xerophila*)
- Pine Hill ceanothus (*Ceanothus roderickii*)
- Red Hills soaproot (*Chlorogalum grandiflorum*)
- Bisbee Peak rush-rose (*Crocanthemum suffrutescens*)
- Dwarf downingia (*Downingia pusilla*)
- Tuolumne button-celery (*Eryngium pinnatisectum*)
- Pine Hill flannelbush (*Fremontodendron decumbens*)
- Pincushion navarretia (*Navarretia myersii*)
- Layne's ragwort (*Packera layneae*)
- Sanford's arrowhead (*Sagittaria sanfordii*)

The Study Area was comprehensively surveyed on foot by walking rough transects through the site to ensure full coverage. The surveys were floristic in nature, which means that all plant species observed on-site were identified to the taxonomic level necessary to determine rarity. Thus, if a special-status plant was present but not on the target list, it would have been detected and documented. Plant taxonomy was based on the nomenclature in the *Jepson eFlora* (Jepson Flora Project 2021). Vegetation communities were classified according to the *Manual of California Vegetation, Second Edition* (Sawyer et al. 2009). Qualifications for the botanist that conducted the surveys are included in **Attachment A**, a list of reference populations of target plants visited is included in **Attachment B**, and a comprehensive list of all plant species observed during surveys of the Study Area is included in **Attachment C**.

## 3.0 EXISTING CONDITIONS

The Study Area is located on rolling terrain and consists primarily of annual brome grassland and blue oak woodlands. A narrow band of willow riparian scrub occurs along a seasonal wetland swale in the central portion of the Study Area, and two large ponds occur in the northern portion of the Study Area along the intermittent Green Spring Creek. An historic homestead and associated outbuildings are located just south of the eastern pond, and an active strawberry farm is located just north of the western pond. A small patch of Valley needlegrass grassland is located on the embankment for the western pond. The heavily trafficked Green Valley Road runs through the northern portion of the Study Area; it is bordered by annual grasslands and oak woodland to the west, and serpentine chaparral to the east. In the northeastern portion of the Study Area, south and west of Green Valley Road, there is an extensively-manipulated terrace that has been used for the growing, harvesting, and sale of strawberries, blackberries, and potentially other crops, but has since been left fallow. As a result, the terrace area is primarily comprised of non-native annual grassland species and an unvegetated sandy/gravely parking area. To the west and south of this terrace, a relatively steep slope drops down to a poorly maintained dirt road. A very disturbed/open chaparral community occupies much of this slope, and just above the dirt road are a number of rock outcrops. In addition to the ponds and intermittent Green Springs Creek, a number of seasonal wetland swales, seeps, small depressional wetlands, and ephemeral drainages are scattered throughout the Study Area. Elevations within the Study Area range from 820 feet to 1,240 feet above Mean Sea Level.

The majority of the Study Area supports oak woodland comprised primarily of valley oaks (*Quercus lobata*), live oaks (*Quercus wislizenii*), and blue oaks (*Quercus douglasii*). The understory is dominated by dogtail grass (*Cynosurus echinatus*), wild oats (*Avena* sp.), rip-gut brome (*Bromus diandrus*), medusa head (*Elymus caput-medusae*), and soft chess (*Bromus hordeaceus*).

The annual brome grasslands are dominated by rip-gut brome, medusa head, and soft chess. Other common species include yellow star-thistle (*Centaurea solstitialis*), Mediterranean barley (*Hordeum murinum*), and split-leaf geranium (*Geranium dissectum*). Some patches of the annual brome grassland support a diverse suite of native forbs, including hyacinth brodiaea (*Triteleia hyacinthina*), Valley sky lupine (*Lupinus nanus*), blue dicks (*Dichelostemma capitatum*), and field popcorn flower (*Plagiobothrys fulvus*).

## 3.1 Aquatic Resources

### *3.1.1 Seeps*

Four seeps occur within the study area. Seeps occur on sloping terrain and are areas of groundwater seepage. Plant species found in these areas include Baltic rush (*Juncus balticus*), Mediterranean barley, perennial rye (*Lolium perenne*), and spiny-fruited buttercup (*Ranunculus muricatus*).

### *3.1.2 Seasonal Wetland Swales*

Seasonal wetland swales are linear seasonal wetlands, and within the Study Area they are dominated by perennial ryegrass, Mediterranean barley, curly dock (*Rumex crispus*), tall flat sedge (*Cyperus eragrostis*), and spiny-fruited buttercup.

### *3.1.3 Seasonal Wetlands*

Two depressional seasonal wetlands are present within the Study Area. The vegetation within these features was sparse and consisted of slender popcorn flower (*Plagiobothrys stipitatus ssp. micranthus*), curly dock, Mediterranean barley, and perennial rye.

### *3.1.4 Ponds*

Two ponds occur within the Study Area, behind historic impoundments of Green Spring Creek. The western (downstream) pond appears to be perennial, and the eastern (upstream) pond is intermittent in many years. Both appear to fill in winter in most years. The western pond is unvegetated in the center due to the depth of the water. The fringes of the western pond and much of the eastern pond support common tule (*Schoenoplectus acutus var. occidentalis*), cattails (*Typha* species), creeping spike rush (*Eleocharis macrostachya*), water pepper (*Persicaria hydropiper*), and seep spring monkey flower (*Erythranthe guttata*), among many others.

### *3.1.5 Green Spring Creek*

The intermittent Green Spring Creek is primarily unvegetated, due to the scouring effects of water. Any vegetation that occurs along the fringes of Green Springs Creek is similar to that in the ponds.

### *3.1.6 Ephemeral Drainages*

Several ephemeral drainages also occur within the Study Area; these features convey only stormwater flow during and immediately following storm events. As such, they are primarily unvegetated due to the scouring effects of water. Any vegetation that does occur in the channel is typically comprised of ruderal upland plant species or species consistent with the surrounding upland vegetation community.

### 3.2 Soils

The Natural Resources Conservation Service has mapped four soil mapping units within the Study Area: (AwD) Auburn silt loam, 2 to 30% slopes; (AxD) Auburn very rocky silt loam, 2 to 30% slopes; (PrD) Placer diggings; and (SaF) Serpentine rock land (**Figure 3**) (NRCS 2021). Unit SaF is comprised of serpentine rocks, and units AwD and AxD are comprised of material weathered from metabasic or metasedimentary rock such as amphibolite schist, greenstone schist, or diabase (NRCS 2021).

## 4.0 SURVEY RESULTS

### 4.1 Jepson's Onion

Jepson's onion is not listed under the federal or California Endangered Species Act; however, it is designated as a CRPR List 1B.2 plant. Jepson's onion is found in chaparral, cismontane woodland, and lower montane coniferous forests on serpentine or volcanic soils (CNPS 2021). It is a bulbiferous perennial, and it blooms from April through August at elevations from 980 feet to 4,330 feet (CNPS 2021).

The chaparral on serpentine soils in the northeastern portion of the Study Area provides suitable habitat for this species. This species was not observed during the 2021 protocol-level special status plant survey, which was conducted in May and June when this species would have been in bloom.

### 4.2 Big-Scale Balsamroot

Big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*) is not federally- or state-listed, but it is classified as a CRPR List 1B.2 plant. It is a perennial herbaceous species that occurs in chaparral, cismontane woodland and valley and foothill grasslands between 295 and 4,600 feet (CNPS 2021). Big-scale balsamroot blooms from March through June and may be found on serpentine soils, though it is known to grow on other soil types as well (CNPS 2021).

Upland communities throughout the Study Area provide suitable habitat for this species. This species was not observed during the 2021 protocol-level special status plant survey, which was conducted in April, May, and June when this species would have been in bloom.

### 4.3 Stebbins' Morning Glory

Stebbins' morning glory is a federal- and state-listed endangered species and is classified as a CRPR 1B.1 plant. It is a perennial rhizomatous herb that is found in openings in chaparral and cismontane woodland on serpentine or gabbroic soils (CNPS 2021). Stebbins' morning glory blooms from April to July at elevations from 600 feet to 3,600 feet (CNPS 2021).

The chaparral on serpentine soils in the northeastern portion of the Study Area provides suitable habitat for this species. This species was not observed during the 2021 protocol-level special status plant survey, which was conducted in May and June when this species would have been in bloom.

### 4.4 Chaparral Sedge

Chaparral sedge is not federally- or state-listed, but it is classified as a CRPR List 1B.2 plant. It is a perennial herb that is found in chaparral, cismontane woodland, and lower coniferous forests on serpentine or gabbroic soils (CNPS 2021). Chaparral sedge blooms from March through June at elevations from 1,500 feet to 2,500 feet (CNPS 2021).

The chaparral on serpentine soils in the northeastern portion of the Study Area provides suitable habitat for this species. This species was not observed during the 2021 protocol-level special status plant survey, which was conducted in May and June when this species would have been identifiable.

### 4.5 Pine Hill Ceanothus

Pine Hill ceanothus (*Ceanothus roderickii*) is listed as endangered under the federal Endangered Species Act, as a California rare species, and is classified as a CRPR List 1B.1 plant. Pine Hill ceanothus is a prostrate, low-growing shrub that is known primarily from Pine Hill in El Dorado County. The species occurs in chaparral and cismontane woodland with Gabbro or serpentine soils between 805 and 3,575 feet. It blooms from April to June.

The chaparral on serpentine soils in the northeastern portion of the Study Area provides marginally suitable habitat for this species, as it is largely tightly restricted to the Pine Hill Formation. This species was not observed during the 2021 protocol-level special status plant survey, which was conducted in May when this species was observed in bloom at another site in the vicinity.

### 4.6 Red Hills Soaproot

Red Hills soaproot is not federally- or state-listed, but it is classified as a CRPR List 1B.2 plant. Red Hills soaproot occurs in chaparral, cismontane woodland, and lower montane coniferous forest on gabbro, serpentine, and other soils (CNPS 2021). This perennial blooms from May to June and is found from approximately 800 feet to 3,300 feet (CNPS 2021).

Upland communities throughout the Study Area provides suitable habitat for this species. This species was not observed during the 2021 protocol-level special status plant survey, which was conducted in June when this species was observed in bloom on other nearby sites.

### 4.7 Bisbee Peak Rush Rose

Bisbee Peak rush-rose (*Crocanthemum suffrutescens*) is not federally- or state-listed, but it is classified as a CRPR List 3.2 plant. Bisbee Peak rush-rose occurs in burned or otherwise disturbed areas in chaparral often on Ione Formation or Gabbro soils, but also on other soils (CNPS 2021). This perennial blooms from April through August and is found from approximately 245 feet to 2,200 feet (CNPS 2021).

The chaparral on serpentine soils in the northeastern portion of the Study Area provides suitable habitat for this species. This species was not observed during the 2021 protocol-level special status plant survey, which was conducted in June when this species was observed in bloom on other nearby sites.

### 4.8 Dwarf Downingia

Dwarf downingia (*Downingia pusilla*) is not federally- or state-listed, but it is classified as a CRPR List 1B.2 plant. It is a diminutive annual herb that is strongly associated with vernal pools and other seasonally inundated features at elevations ranging from sea level to approximately 1,500 feet (CNPS 2021). Dwarf downingia is typically associated with areas that experience a moderate degree of disturbance, and it blooms from March to May.

The seasonal wetlands and seasonal wetland swales within the Study Area represent marginal habitat for this species. This species was not observed during the 2021 special-status plant survey of the Study Area, which was conducted in April, when this species was observed in bloom at other nearby sites.

### 4.9 Tuolumne Button-Celery

Tuolumne button-celery is not federally- or state-listed, but it is classified as a CRPR List 1B.2 plant. This species occurs in mesic areas in cismontane woodlands and coniferous forests, as well as vernal pools (CNPS 2021). Tuolumne button-celery blooms from May through August, and is found from approximately 300 feet to 3,000 feet (CNPS 2021).

Seasonal wetlands, seasonal wetland swales, seeps, and intermittent drainages throughout the Study Area provide suitable habitat for this species. This species was not observed during the 2021 protocol-level special status plant survey, which was conducted when the species would have been identifiable at least to genus.

### 4.10 Pine Hill Flannelbush

Pine Hill flannelbush (*Fremontodendron decumbens*) is listed as endangered under the federal Endangered Species Act, as a California rare species, and is classified as a CRPR List 1B.2 plant. Pine Hill flannelbush is a sprawling, low-growing shrub that is known from Pine Hill in El Dorado County and potentially from an isolated population in Nevada County. The species favors foothill chaparral and cismontane woodland with rocky Gabbro or serpentine soils between 1,395 and 2,495 feet. It blooms from April to June.

The chaparral on serpentine soils in the northeastern portion of the Study Area provides marginally-suitable habitat for this species, as it is largely tightly restricted to the Pine Hill Formation. This species was not observed during the 2021 protocol-level special status plant survey, which was conducted in late May when this species would have been in bloom.

### 4.11 Pincushion Navarretia

Pincushion navarretia (*Navarretia myersii* ssp. *myersii*) is not federally- or state-listed, but it is classified as a CRPR List 1B.1 plant. This annual herb is found in vernal pools and other mesic areas in annual grasslands on clay soils (CNPS 2021). Pincushion navarretia is found at elevations between approximately 65 feet and 1,100 feet and blooms from April through May (CNPS 2021).

The seasonal wetlands within the Study Area represent marginally suitable habitat for this species. This species was not observed during the 2021 special-status plant survey of the Study Area, which was conducted in April and May, when this species would have been in bloom.

### 4.12 Layne's Ragwort

Layne's ragwort is a federally threatened species, a state rare species, and is classified as a CRPR List 1B.2 plant. It is a perennial herb found in rocky areas in chaparral and cismontane woodlands with serpentine or Gabbroic soils (CNPS 2021). Layne's ragwort blooms from April through August at elevations from 650 feet to 3,560 feet (CNPS 2021).

The chaparral on serpentine soils in the northeastern portion of the Study Area provides suitable habitat for this species. This species was not observed during the 2021 protocol-level special status plant survey, which was conducted in late May when this species was in bloom at other sites in the vicinity.

### 4.13 Sanford's Arrowhead

Sanford's arrowhead is not federally or state listed, but it is classified as a CRPR List 1B.2 plant. It generally occurs in shallow freshwater habitats associated with drainages, canals, and larger ditches that sustain inundation and/or slow-moving water into early summer. It is a perennial rhizomatous emergent species that blooms from May to October at elevations from sea level to 2,130 feet (CNPS 2021).

The ponds and Green Spring Creek within the Study Area provide suitable habitat for this species. This species was not observed during the 2021 protocol-level special status plant survey, which was conducted in June when this species was in bloom at other sites in the region.

### 4.14 CRPR List 4 Species

As noted above in Section 2.0, this survey targeted plants on CRPR Lists 1, 2, and 3, but the survey was floristic in nature, meaning that all rare plants would be documented regardless of whether they were

targeted. Serpentine bluecup (*Githopsis pulchella* ssp. *serpentinicola*), a CRPR List 4 plant, was documented on a roadcut south of the historic berry farm in the northeastern portion of the Study Area (**Figure 4**). This roadcut is in an area of serpentine soils, and a number of other common annual species were also observed co-occurring with the serpentine bluecup in this area, including chaparral clarkia (*Clarkia affinis*), small-head clover (*Trifolium microcephalum*), soft brome, and tarweed (*Madia subspicata*). The plants were scattered within three small patches totaling 0.045 acre, comprised of approximately 330 plants. This species is a CRPR List 4 species, which is typically not considered in CEQA review, as List 4 is a "Watch List," but it has been documented and will be reported to provide more information about the species' range.

In addition, a population of *Clarkia biloba* was observed just east of the northernmost serpentine bluecup population; this population was mapped as the common two-lobed clarkia (*Clarkia biloba* ssp. *biloba*), as approximately 90% of the flowers in bloom had petal morphology matching this common subspecies. However, approximately 10% of the flowers had more shallowly-lobed petals that key to Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeeae*), which is a CRPR List 4 species. This region of El Dorado County is known to be an area of hybridization between the two subspecies, and given that many of the flowers with more shallowly-lobed petals were on plants that had mostly deeply-lobed petals, the entire population was considered to be the common two-lobed clarkia.

### 4.15 Valley Needlegrass Grassland

A 0.031-acre patch of Valley needlegrass (*Nasella pulchra*) grassland is present on the dam of the western-most pond (**Figure 4**). In this area, Valley needlegrass comprises approximately 80% cover, and is interspersed with teasel (*Diplacus fullonium*), Klamath weed (*Hypericum perforatum*), slender milkweed (*Asclepias fascicularis*), elegant brodiaea (*Brodiaea elegans*), and Baltic rush. Valley needlegrass grassland is considered by CDFW to be a "Sensitive Natural Community" (CDFW 2021).

## 5.0 CONCLUSION

None of the target plant species were observed during the 2021 special-status plant survey of the Study Area. However, Valley needlegrass grassland was observed on the westernmost pond embankment. No other special-status plants were observed within the Study Area during the 2021 special-status plant survey.

## 6.0 REFERENCES


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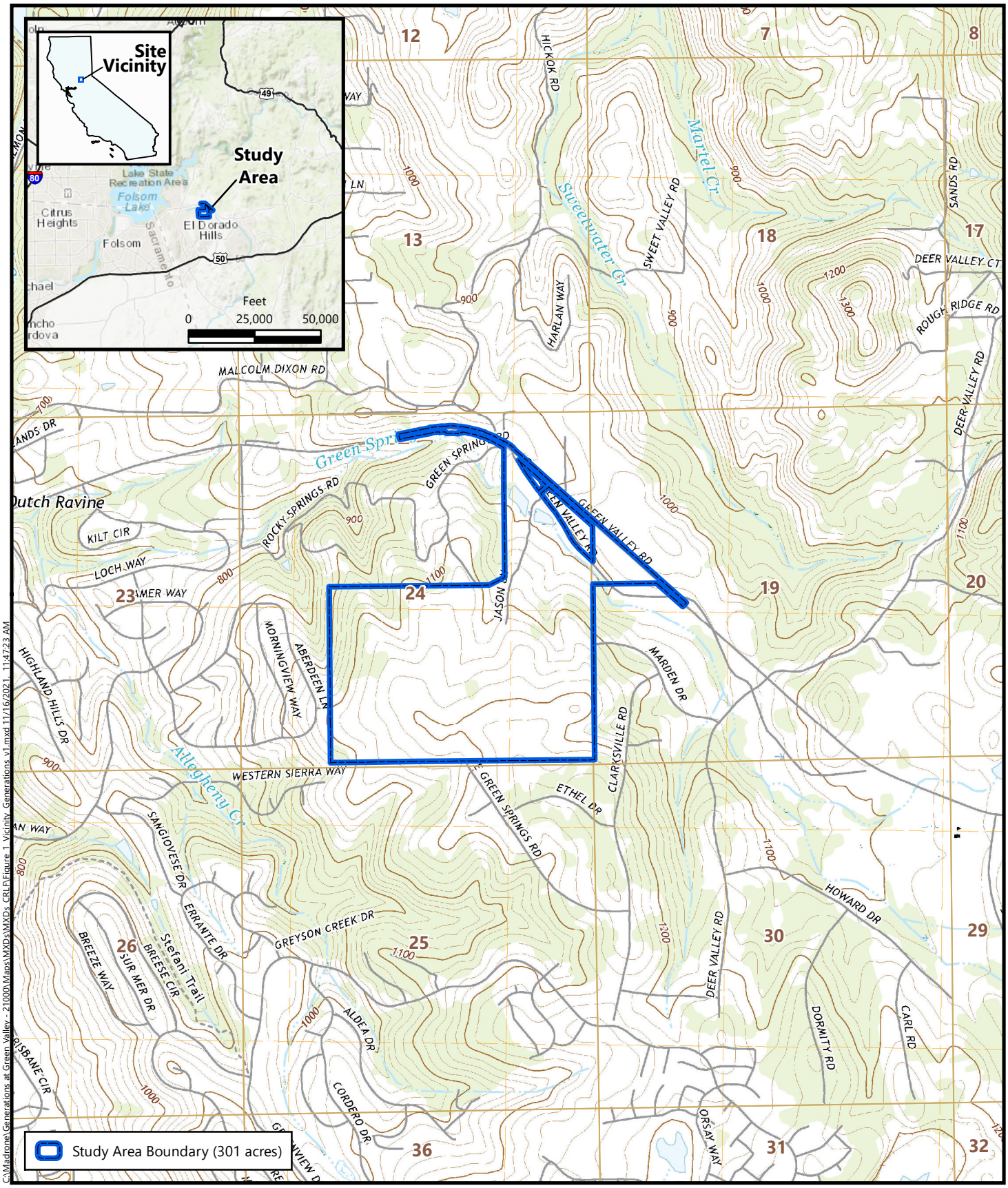
# Figures

Figure 1. Vicinity Map

Figure 2. Aquatic Resources

Figure 3. Natural Resources Conservation Service Soils

Figure 4. Special-Status Plant Survey Results




C:\Madrone\Generations at Green Valley - 21000\Maps\MXDs\MXDs GRL\Figure 1 Vicinity Generations v1.mxd 11/16/2021 11:47:23 AM

Source: United States Geologic Survey, 2018.
"Clarksville, California" 7.5-Minute Topographic Quadrangle
Section 24, Township 10 North, Range 8 East, and
Section 19, Township 10 North, Range 9 East, MDB&M
Longitude -121.045833, Latitude 38.705900

**Figure 1**
**Site Vicinity**

*Generations at Green Valley*
*El Dorado County, California*

MADRONE ECOLOGICAL CONSULTING

Green Valley Road

Jason Lane

Verde Valle Lane

Green Valley Road

East Green Springs Road

Study Area Boundary (301 acres)

**Aquatic Resources (7.444 acres)**

**Wetlands (2.558 acres)**

- Seasonal Wetland (0.026 acre)
- Seasonal Wetland Swale (2.138 acres)
- Seep (0.394 acre)

**Other Waters (4.886 acres)**

- Ephemeral Drainage (0.245 acre)
- Intermittent Drainage (0.811 acre)
- Pond (3.803 acres)
- Roadside Ditch (0.027 acre)

N

Feet

0 300 600

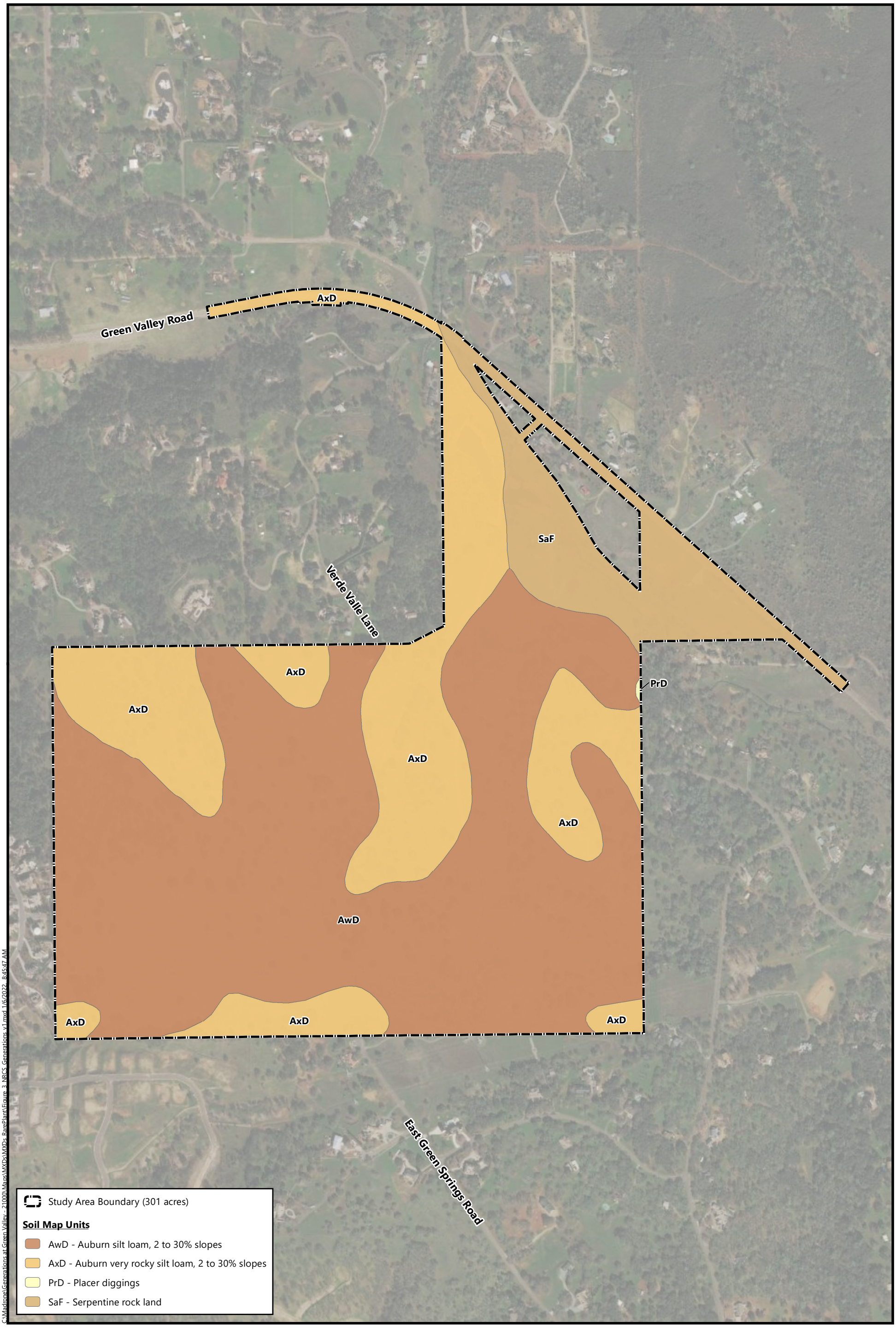
C:\Madrone\Generations at Green Valley - 21000\Maps\MXDs\MXDs CRLF\Figure 2 AquaticResources Generations v1.mxd 11/29/2021 12:57:03 PM

**Aerial Source:** Maxar, 27 February 2021, and 4 March 2021.

**Figure 2**
**Aquatic Resources**

*Generations at Green Valley*
*El Dorado County, California*

MADRONE ECOLOGICAL CONSULTING




C:\Madrone\Generations at Green Valley - 21000\Maps\MXDs\MXDs - RarePlan\Figure 3 - NRCS Generations v1.mxd 1/6/2022 8:45:47 AM

**Figure 3**
**Natural Resources Conservation Service Soils**

*Generations at Green Valley*
*El Dorado County, California*

MADRONE ECOLOGICAL CONSULTING

**Soil Survey Source:** *USDA, Soil Conservation Service. Soil Survey Geographic (SSURGO) database for El Dorado Area, California*
**Aerial Source:** Maxar, 27 February 2021, and 4 March 2021.

Inset A

Feet
0 75 150

Inset B

Feet
0 75 150

Jason Lane

Verde Valle Lane

Green Valley Road

East Green Springs Road

Study Area Boundary (301 acres)

**Special-Status Plant Survey Results**

- Purple needlegrass grassland (0.031 acre)
- Serpentine bluecup (0.045 acre, 330 plants)

**Aquatic Resources (7.444 acres)**

**Wetlands (2.558 acres)**

- Seasonal Wetland (0.026 acre)
- Seasonal Wetland Swale (2.138 acres)
- Seep (0.394 acre)

**Other Waters (4.886 acres)**

- Ephemeral Drainage (0.245 acre)
- Intermittent Drainage (0.811 acre)
- Pond (3.803 acres)
- Roadside Ditch (0.027 acre)

Feet
0 300 600

N

**Aerial Source:** Maxar, 27 February 2021, and 4 March 2021.

# Figure 4
# Special-Status Plant Survey Results

*Generations at Green Valley*
*El Dorado County, California*

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# Attachments

Attachment A:  Botanist Qualifications

Attachment B:  Target Plant Species Reference Population Information

Attachment C:  Plant Species Observed within the Generations at Green Valley Study Area

# Attachment A

**Botanist Qualifications**

# Rare Plant Survey Botanist Qualifications

## Daria Snider

Ms. Snider has more than 16 years of experience conducting botanical inventories. As a senior biologist, she specializes in rare plant surveys, wetland delineations, and general biological resource inventories. In addition to rare plant surveys, her botanical experience includes general vegetation surveys, aerial and field vegetation mapping, Certified Arborist tree inventories, CRAM Assessments, floristic monitoring, and invasive species identification and mapping. Ms. Snider's experience includes a wide variety of habitat types, including vernal pools, annual grasslands, oak woodland, riparian communities, coastal sage scrub, chaparral, cismontane and montane forests, and desert. Her geographic expertise covers much of California, from Shasta County in the north to the Mojave Desert and San Gabriel Mountains in the south, and from Napa County in the west to the Sierra Nevada foothills and mountains in the east. Her primary focus is on the Sacramento Valley and the adjacent Sierra Nevada foothills.

# Attachment B

**Target Plant Species Reference Population Information**

## Target Plant Species Reference Population Information for the Generations at Green Valley Rare Plant Survey

| Plant Species | Location of Reference Population | Date of Visit | Phenology of Reference Population/ Distinctive Characteristics |
|---|---|---|---|
| *Allium jepsonii* Jepson's onion | Herbarium specimen at UC Davis Center for Plant Diversity | 31 March 2016 | Pressed specimen. Plant is quite tall with white flowers, often tinged pink. Stamens are included, and the petals and sepals are jagged on the edges. |
| *Balsamorhiza macrolepis* Big-scale balsamroot | Herbarium specimen at UC Davis Center for Plant Diversity | 31 March 2016 | Pressed specimen. Similar to Wyethia, but with grey, dissected leaves. Leaves are mostly basal (as opposed to Wyethia, which has basal and cauline leaves). |
| *Calystegia stebbinsii* Stebbins morning glory | Meder Road in Cameron Park<br><br>CNDDB Occurrence #6 | 22 April 2021 | Plants are in full bloom, and appear to be as abundant as typically observed in this location. |
| *Carex xerophila* Chaparral sedge | Pine Hill unit of Pine Hill Preserve, El Dorado County | 16 May 2016 | Abundant on roadcuts and the hilltop. The majority of the plants were vegetative, but a few plants exhibited the characteristic hairy perigynia. Plants are small, cespitose, and have inflorescences with male flowers at the tip and only a few perigynia at the base. |
| *Pine Hill ceanothus* | CNDDB Occurrence #1 | 26 April 2021 | Plants are about 50% in bloom, remainder in bud. Readily identifiable by prostrate habit and small leaves. |
| *Chlorogalum grandiflorum* Red Hills soaproot | CNDDB Occurrence #19, just north of Ponte Morino Drive | 8 June 2021 | Abundant. The majority of plants were in bloom or past bloom, exhibiting the characteristic short pedicel that is indicative of this species. Plants are relatively small rosettes with wavy leaf margins. |

| Plant Species | Location of Reference Population | Date of Visit | Phenology of Reference Population/ Distinctive Characteristics |
|---|---|---|---|
| *Crocanthemum suffrutescens*<br>Bisbee Peak rush-rose | CNDDB Occurrence #7, along the north side of Ione-Buena Vista Road, near Ione, California<br><br>Private property in Cameron Park | 22 April 2021<br><br>8 June 2021 | Plants not in bloom, but the perennial plants are readily identifiable to those familiar with it by the distinctive dark green stems with linear leaves.<br><br>Three plants were tentatively identified from vegetative characteristics on 10 May, and were observed in full bloom on 8 June 2021. |
| *Downingia pusilla*<br>Dwarf downingia | Woodcreek Oaks Wetland Preserve<br><br>CNDDB Occurrence #142 | 6 April 2021 | Population is in bloom quite early this year, with many more plants than previously observed in this location. |
| *Eryngium pinnatisectum*<br>Tuolumne button-celery | Herbarium specimen at UC Davis Center for Plant Diversity | 31 March 2016 | Pressed specimen. Flowers have very distinctive inflorescence bracts with thickened margins and no marginal spines. |
| *Fremontodendron decumbens*<br>Pine Hill flannelbush | Pine Hill unit of Pine Hill Preserve, El Dorado County | 16 May 2016 | Scattered along edges of road on the road up to Pine Hill. Plants were easily identifiable by their palmate leaves and showy orange flowers. Just starting to bloom. |
| *Navarretia myersii* ssp. *myersii*<br>Pincushion navarretia | Herbarium specimen at UC Davis Center for Plant Diversity<br><br>Online Jepson Manual and Calflora | 23 April 2019<br><br>March through May 2020 | Pressed specimen. Corollas for this species are quite long (12-21 mm vs 4-10 mm for the similar but more common *Navarretia leucocephala* ssp. *leucocephala*). In addition, the calyx lobes for this species are long-hairy as opposed to the generally glabrous calyx lobes for *N. leucocephala* ssp. *leucocephala*. |

| Plant Species | Location of Reference Population | Date of Visit | Phenology of Reference Population/ Distinctive Characteristics |
|---|---|---|---|
| *Packera laynae*<br>Layne's ragwort | CNDDB Occurrence #18 | 10 May 2021 | Abundant in patches in openings in Pine Hill chaparral. Plants were just starting to bloom. Plants are readily identifiable by their tall habit with almost spherical inflorescences. |
| | CNDDB Occurrence #2, just north of Ponte Morino Drive | 8 June 2021 | Plants were abundant in patches near top of hill. Most were past bloom, but still readily identifiable to species. |
| *Sagittaria sanfordii*<br>Sanford's arrowhead | Population on private property in Rancho Cordova | 21 June 2021 | Approximately 50% of the plants were in bloom, 25% in bud, and 25% in fruit. Characteristic flowers, fruits, and emergent leaves with petioles with a triangular cross-section were all visible. |

# Attachment C

**Plant Species Observed within the Generations at Green Valley Study Area**

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# Plant Species Observed within the Generations at Green Valley Study Area 26 April, 7 May, and 9 June 2021

| Family/Species Name | Common name | Native/non-native |
|---|---|---|
| **ADOXACEAE** | | |
| *Sambucus nigra subsp. caerulea* | Blue elderberry | Native |
| **ALISMATACEAE** | | |
| *Alisma triviale* | Northern water plantain | Native |
| **AMARYLLIDACEAE** | | |
| *Narcissus pseudonarcissus* | Daffodil | Non-Native |
| **ANACARDIACEAE** | | |
| *Toxicodendron diversilobum* | Western poison oak | Native |
| **APIACEAE** | | |
| *Anthriscus caucalis* | Bur-chervil | Non-Native |
| *Daucus carota* | Queen Anne's lace | Non-Native |
| *Daucus pusillus* | Wild carrot | Native |
| *Sanicula bipinnatifida* | Purple sanicle | Native |
| *Sanicula crassicaulis* | Gamble weed | Native |
| *Torilis arvensis* | Tall sock-destroyer | Non-Native |
| *Torilis nodosa* | Short sock-destroyer | Non-Native |
| **APOCYNACEAE** | | |
| *Asclepias fascicularis* | Narrow-leaf milkweed | Native |
| *Vinca major* | Greater periwinkle | Non-Native |
| **ARACEAE** | | |
| *Lemna minor* | Duckweed | Native |
| **ARISTOLOCHIACEAE** | | |
| *Aristolochia californica* | Pipevine | Native |
| **ASTERACEAE** | | |
| *Achillea millefolium* | Yarrow | Native |

| Family/Species Name | Common name | Native/non-native |
|---|---|---|
| *Agoseris retrorsa* | Spearleaf agoseris | Native |
| *Anthemis cotula* | Mayweed | Non-Native |
| *Arctotis venusta* | Blue-eyed african daisy | Non-Native |
| *Baccharis pilularis subsp. pilularis* | Coyote brush | Native |
| *Carduus pycnocephalus subsp. pycnocephalus* | Italian thistle | Non-Native |
| *Centaurea solstitialis* | Yellow star-thistle | Non-Native |
| *Chondrilla juncea* | Skeleton weed | Non-Native |
| *Cirsium vulgare* | Bull thistle | Non-Native |
| *Dittrichia graveolens* | Stinkwort | Non-Native |
| *Eriophyllum lanatum var. grandiflorum* | Woolly sunflower | Native |
| *Euthamia occidentalis* | Western goldenrod | Native |
| *Grindelia camporum* | Great Valley gumweed | Native |
| *Helenium puberulum* | Sneezeweed | Native |
| *Holocarpha virgata subsp. virgata* | Slender tarweed | Native |
| *Holozonia filipes* | Whitecrown | Native |
| *Hypochaeris glabra* | Smooth cat's-ear | Non-Native |
| *Jensia rammii* | Ramm's madia | Native |
| *Lactuca serriola* | Prickly lettuce | Non-Native |
| *Leontodon saxatilis subsp. saxatilis* | Hairy hawkbit | Non-Native |
| *Logfia gallica* | Daggerleaf cottonrose | Non-Native |
| *Madia citriodora* | Tarweed | Native |
| *Madia subspicata* | Tarweed | Native |
| *Matricaria discoidea* | Pineapple weed | Native |
| *Micropus californicus* | Q-tips | Native |
| *Psilocarphus oregonus* | Oregon woollyheads | Native |
| *Psilocarphus tenellus* | Slender woolly-marbles | Native |
| *Senecio vulgaris* | Common groundsel | Non-Native |
| *Silybum marianum* | Milk thistle | Non-Native |
| *Sonchus asper subsp. asper* | Prickly sow thistle | Non-Native |
| *Uropappus lindleyi* | Silverpuffs | Native |
| *Xanthium strumarium* | Cocklebur | Native |
| **BORAGINACEAE** | | |
| *Amsinckia intermedia* | Common fiddleneck | Native |
| *Amsinckia menziesii* | Common fiddleneck | Native |
| *Cryptantha dissita* | Lake cryptantha | Native |
| *Plagiobothrys fulvus var. campestris* | Field popcornflower | Native |
| *Plagiobothrys nothofulvus* | Rusty popcornflower | Native |

| Family/Species Name | Common name | Native/non-native |
|---|---|---|
| *Plagiobothrys stipitatus var. micranthus* | Slender popcorn flower | Native |
| **BRASSICACEAE** | | |
| *Brassica nigra* | Black mustard | Non-Native |
| *Hirschfeldia incana* | Tumble mustard | Non-Native |
| *Lepidium didymum* | Lesser swine cress | Non-Native |
| *Lepidium nitidum* | Shining pepperweed | Native |
| *Nasturtium officinale* | Water cress | Native |
| *Raphanus sativus* | Radish | Non-Native |
| *Rorippa curvisiliqua* | | Native |
| *Sisymbrium irio* | London rocket | Non-Native |
| *Thysanocarpus curvipes* | Fringepod | Native |
| **CAMPANULACEAE** | | |
| *Githopsis pulchella subsp. serpentinicola* | Serpentine bluecup | Native |
| **CARYOPHYLLACEAE** | | |
| *Cerastium glomeratum* | Sticky mouse-ear chickweed | Non-Native |
| *Petrorhagia dubia* | Grass pink | Non-Native |
| *Scleranthus annuus subsp. annuus* | Knawel | Non-Native |
| *Silene gallica* | Small-flower catchfly | Non-Native |
| *Spergularia rubra* | Red sand-spurrey | Non-Native |
| *Stellaria media* | Common chickweed | Non-Native |
| **CHENOPODIACEAE** | | |
| *Chenopodium album* | Lamb's quarters | Non-Native |
| **CONVOLVULACEAE** | | |
| *Calystegia occidentalis subsp. occidentalis* | Morning glory | Native |
| *Convolvulus arvensis* | Bindweed | Non-Native |
| **CRASSULACEAE** | | |
| *Crassula aquatica* | Water pygmy weed | Native |
| *Dudleya cymosa subsp. cymosa* | *Canyon live forever* | Native |
| **CYPERACEAE** | | |
| *Carex praegracilis* | Freeway sedge | Native |
| *Cyperus eragrostis* | Tall nutsedge | Native |
| *Eleocharis acicularis var. acicularis* | Least spikerush | Native |

| Family/Species Name | Common name | Native/non-native |
|---|---|---|
| *Eleocharis macrostachya* | Creeping spikerush | Native |
| *Schoenoplectus acutus var. occidentalis* | Common tule | Native |
| **DIPSACACEAE** | | |
| *Dipsacus fullonum* | Wild teasel | Non-Native |
| **EUPHORBIACEAE** | | |
| *Croton setiger* | Turkey-mullein | Native |
| *Triadica sebifera* | Chinese tallowtree | Non-Native |
| **FABACEAE** | | |
| *Acmispon americanus var. americanus* | Spanish lotus | Native |
| *Acmispon strigosus* | Strigose lotus | Native |
| *Lupinus nanus* | Valley sky lupine | Native |
| *Medicago polymorpha* | California burclover | Non-Native |
| *Melilotus indicus* | Sourclover | Non-Native |
| *Trifolium campestre* | Hop clover | Non-Native |
| *Trifolium dubium* | Little hop clover | Non-Native |
| *Trifolium glomeratum* | Clustered clover | Non-Native |
| *Trifolium hirtum* | Rose clover | Non-Native |
| *Trifolium microcephalum* | Small-head clover | Native |
| *Trifolium microdon* | Thimble clover | Native |
| *Trifolium subterraneum* | Subterranean clover | Non-Native |
| *Vicia sativa* | Spring vetch | Non-Native |
| *Vicia villosa* | Hairy vetch, winter vetch | Non-Native |
| **FAGACEAE** | | |
| *Quercus douglasii* | Blue oak | Native |
| *Quercus kelloggii* | California black oak | Native |
| *Quercus lobata* | Valley oak | Native |
| *Quercus wislizeni* | Interior live oak | Native |
| **GERANIACEAE** | | |
| *Erodium botrys* | Filaree | Non-Native |
| *Erodium cicutarium* | Redstem filaree | Non-Native |
| *Geranium dissectum* | Cut leaf geranium | Non-Native |

| Family/Species Name | Common name | Native/non-native |
|---|---|---|
| **HYPERICACEAE** | | |
| *Hypericum perforatum subsp. perforatum* | Klamathweed | Non-Native |
| **JUGLANDACEAE** | | |
| *Juglans hindsii* | Northern California black walnut | Native |
| **JUNCACEAE** | | |
| *Juncus balticus subsp. ater* | Baltic rush | Native |
| *Juncus bufonius* | Toad rush | Native |
| *Luzula comosa var. comosa* | | Native |
| **LAMIACEAE** | | |
| *Lamium amplexicaule* | Henbit | Non-Native |
| *Marrubium vulgare* | Horehound | Non-Native |
| *Mentha spicata* | Spearmint | Non-Native |
| *Stachys rigida var. rigida* | Hedge nettle | Native |
| *Trichostema lanceolatum* | Vinegar weed | Native |
| **LILIACEAE** | | |
| *Calochortus albus* | White globe lily | Native |
| **LINACEAE** | | |
| *Linum bienne* | Blue flax | Non-Native |
| **LYTHRACEAE** | | |
| *Lythrum hyssopifolia* | Hyssop loosestrife | Non-Native |
| **MALVACEAE** | | |
| *Sidalcea hirsuta* | Hairy checkerbloom | Native |
| **MARSILEACEAE** | | |
| *Marsilea vestita subsp. vestita* | Hairy water fern | Native |
| **MONTIACEAE** | | |
| *Calandrinia menziesii* | Red maids | Native |
| *Claytonia perfoliata subsp. perfoliata* | Miner's lettuce | Native |
| *Claytonia rubra subsp. rubra* | Miner's lettuce | Native |

| Family/Species Name | Common name | Native/non-native |
|---|---|---|
| **MORACEAE** | | |
| *Ficus carica* | Edible fig | Non-Native |
| **MYRSINACEAE** | | |
| *Lysimachia arvensis* | Scarlet pimpernel | Non-Native |
| **MYRTACEAE** | | |
| *Eucalyptus globulus* | Blue gum | Non-Native |
| **ONAGRACEAE** | | |
| *Clarkia affinis* | Chaparral clarkia | Native |
| *Clarkia biloba subsp. biloba* | Two lobed clarkia | Native |
| *Clarkia purpurea subsp. quadrivulnera* | Four-spot | Native |
| *Epilobium brachycarpum* | Panicled willow-herb | Native |
| *Epilobium torreyi* | Torrey's willow-herb | Native |
| **OROBANCHACEAE** | | |
| *Castilleja attenuata* | Valley tassels | Native |
| *Castilleja exserta subsp. exserta* | Purple owl's clover | Native |
| *Triphysaria eriantha subsp. eriantha* | Butter and eggs | Native |
| *Triphysaria versicolor subsp. versicolor* | Yellow owl's clover | Native |
| **OXALIDACEAE** | | |
| *Oxalis micrantha* | Dwarf wood-sorrel | Non-Native |
| **PAPAVERACEAE** | | |
| *Eschscholzia caespitosa* | Tufted poppy | Native |
| *Eschscholzia californica* | California poppy | Native |
| *Eschscholzia lobbii* | Frying pans | Native |
| **PHRYMACEAE** | | |
| *Erythranthe guttata* | Seep-spring monkeyflower | Native |
| **PHYTOLACCACEAE** | | |
| *Phytolacca americana var. americana* | Pokeweed | Non-Native |
| **PINACEAE** | | |
| *Pinus sabiniana* | Foothill pine | Native |

| Family/Species Name | Common name | Native/non-native |
|---|---|---|
| **PLANTAGINACEAE** | | |
| *Plantago erecta* | Dotseed plantain | Native |
| *Plantago lanceolata* | English plantain | Non-Native |
| *Veronica americana* | American brooklime | Native |
| *Veronica anagallis-aquatica* | Water speedwell | Non-Native |
| *Veronica peregrina subsp. xalapensis* | Purslane speedwell | Native |
| | | |
| **POACEAE** | | |
| *Aegilops triuncialis* | Barbed goat grass | Non-Native |
| *Aira caryophyllea* | Silver hair grass | Non-Native |
| *Avena barbata* | Slender wild oat | Non-Native |
| *Avena fatua* | Wild oat | Non-Native |
| *Brachypodium distachyon* | False brome | Non-Native |
| *Briza minor* | Annual quaking grass | Non-Native |
| *Bromus diandrus* | Ripgut grass | Non-Native |
| *Bromus hordeaceus* | Soft chess | Non-Native |
| *Bromus madritensis subsp. rubens* | Red brome | Non-Native |
| *Bromus tectorum* | Cheat grass, downy chess | Non-Native |
| *Cynodon dactylon* | Bermuda grass | Non-Native |
| *Cynosurus echinatus* | Bristly dogtail grass | Non-Native |
| *Elymus elymoides* | Squirreltail | Native |
| *Elymus ponticus* | Tall wheat grass | Non-Native |
| *Festuca bromoides* | Brome fescue | Non-Native |
| *Festuca microstachys* | Six weeks grass | Native |
| *Festuca myuros* | Rattail sixweeks grass | Non-Native |
| *Festuca perennis* | Rye grass | Non-Native |
| *Glyceria declinata* | Low manna grass | Non-Native |
| *Hordeum marinum subsp. gussoneanum* | Mediterranean barley | Non-Native |
| *Hordeum murinum subsp. leporinum* | Hare barley | Non-Native |
| *Melica imperfecta* | Little california melica | Native |
| *Melica torreyana* | Torrey's melic | Native |
| *Paspalum dilatatum* | Dallis grass | Non-Native |
| *Paspalum distichum* | Knot grass | Native |
| *Poa annua* | Annual blue grass | Non-Native |
| *Poa bulbosa subsp. bulbosa* | | Non-Native |
| *Poa pratensis subsp. pratensis* | Kentucky blue grass | Non-Native |
| *Poa secunda subsp. secunda* | One-sided blue grass | Native |
| *Sorghum halepense* | Johnson grass | Non-Native |

| Family/Species Name | Common name | Native/non-native |
|---|---|---|
| *Stipa pulchra* | Purple needle grass | Native |
| **POLEMONIACEAE** | | |
| *Gilia capitata subsp. mediomontana* | | Native |
| *Leptosiphon ciliatus* | Whisker brush | Native |
| **POLYGONACEAE** | | |
| *Eriogonum nudum var. nudum* | Naked wild buckwheat | Native |
| *Eriogonum luteolum var. luteolum* | Golden-carpet wild buckwheat | Native |
| *Persicaria hydropiper* | Waterpepper | Non-Native |
| *Polygonum aviculare subsp. depressum* | Prostrate knotweed | Non-Native |
| *Pterostegia drymarioides* | | Native |
| *Rumex acetosella* | Sheep sorrel | Non-Native |
| *Rumex crispus* | Curly dock | Non-Native |
| *Rumex pulcher* | Fiddle dock | Non-Native |
| **POTAMOGETONACEAE** | | |
| *Potamogeton diversifolius* | Diverse-leaved pondweed | Native |
| **PTERIDACEAE** | | |
| *Pentagramma triangularis* | Goldback fern | Native |
| **RANUNCULACEAE** | | |
| *Delphinium variegatum subsp. variegatum* | Royal larkspur | Native |
| *Ranunculus aquatilis var. aquatilis* | White water buttercup | Native |
| *Ranunculus bonariensis var. trisepalus* | Carter's buttercup | Native |
| *Ranunculus californicus var. californicus* | California buttercup | Native |
| *Ranunculus muricatus* | Spiny fruit buttercup | Non-Native |
| **RHAMNACEAE** | | |
| *Ceanothus cuneatus var. cuneatus* | Buckbrush | Native |
| *Ceanothus integerrimus var. integerrimus* | Deer brush | Native |
| *Frangula californica subsp. tomentella* | Hoary coffeeberry | Native |
| *Rhamnus ilicifolia* | Hollyleaf redberry | Native |
| **ROSACEAE** | | |
| *Heteromeles arbutifolia* | Toyon | Native |
| *Pyracantha species* | Firethorn | Non-Native |
| *Pyrus communis* | Common pear | Non-Native |

| Family/Species Name | Common name | Native/non-native |
|---|---|---|
| *Rubus armeniacus* | Himalayan blackberry | Non-Native |
| **RUBIACEAE** | | |
| *Galium aparine* | Goose grass | Native |
| *Galium murale* | Tiny bedstraw | Non-Native |
| *Sherardia arvensis* | Field madder | Non-Native |
| **SALICACEAE** | | |
| *Populus alba* | White poplar | Non-Native |
| *Salix exigua* | Sandbar willow | Native |
| *Salix gooddingii* | Goodding's black willow | Native |
| *Salix lasiandra var. lasiandra* | Pacific willow | Native |
| *Salix lasiolepis* | Arroyo willow | Native |
| **SAPINDACEAE** | | |
| *Aesculus californica* | California buckeye | Native |
| **SELAGINELLACEAE** | | |
| *Selaginella hansenii* | Hansen's spike moss | Native |
| **SIMAROUBACEAE** | | |
| *Ailanthus altissima* | Tree of heaven | Non-Native |
| **SOLANACEAE** | | |
| *Solanum elaeagnifolium* | White horse-nettle | Non-Native |
| **THEMIDACEAE** | | |
| *Brodiaea elegans subsp. elegans* | Harvest brodiaea | Native |
| *Dichelostemma capitatum* | Blue dicks | Native |
| *Dichelostemma volubile* | Twining brodiaea | Native |
| *Triteleia bridgesii* | Bridges' brodiaea | Native |
| *Triteleia hyacinthina* | Wild hyacinth | Native |
| *Triteleia ixioides subsp. scabra* | Pretty face | Native |
| *Triteleia laxa* | Ithuriel's spear | Native |
| **TYPHACEAE** | | |
| *Typha angustifolia* | Narrow-leaved cattail | Non-Native |
| *Typha latifolia* | Broad-leaved cattail | Native |

| Family/Species Name | Common name | Native/non-native |
|---|---|---|
| **VALERIANACEAE** | | |
| *Plectritis ciliosa* | | Native |
| **VITACEAE** | | |
| *Vitis vinifera* | Wine grape | Non-Native |

# Attachment F

**Survey Results: California Red-Legged Frog and California Tiger Salamander**



# California Red-legged Frog Habitat Assessment

## Generations at Green Valley

El Dorado County
17 December 2021
Updated 11 October 2022

MADRONE ECOLOGICAL CONSULTING

**Prepared for:**
Green Valley Road Benefits, LLC
110 Blue Ravine Road, Suite 209
Folsom, CA 95630

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**Attachments**

Attachment A: Qualifications of Surveyor
Attachment B: Representative Site Photographs
Attachment C: Habitat Assessment Data Form

## 1.0 INTRODUCTION

### 1.1 Purpose of This Assessment

At the request of Green Valley Road Benefits, LLC, Madrone Ecological Consulting, LLC (Madrone) conducted a habitat assessment for the ±301-acre Generations at Green Valley project area (Study Area) in El Dorado County, California. The Study Area is proposed for residential development. The purpose of this assessment is to determine the potential for CRLF habitat to occur on and adjacent to the Study Area. This assessment was prepared in accordance with the *Revised Guidance on Site Assessment and Field Surveys for California Red-Legged Frogs* (USFWS 2005). Eric C. Hansen completed a CRLF habitat assessment for the Study Area in 2013 and determinate level surveys in 2016 (note that a different project was proposed at the time). The results of Mr. Hansen's assessment and determinate level surveys were negative.

### 1.2 Study Area

The Study Area is located within the foothills of western El Dorado County at an elevation of approximately 820 to 1,240 feet above mean sea level. The Study Area is approximately 301 acres in size and is situated south of Green Valley Road, north of the Serrano residential development, and east of the Sterlingshire residential development. The Study Area corresponds to portions of Sections 19 and 24, Township 10 North, and Ranges 8 and 9 East of the "Clarksville, California" 7.5-minute quadrangle (USGS 2018). The approximate center of the Study Area is located at latitude 38.705900° and longitude -121.045833°.

### 1.3 Environmental Setting

The Study Area is located on rolling terrain and mostly consists of annual brome grassland and blue oak woodlands. A narrow band of willow riparian scrub occurs along a seasonal wetland swale in the central portion of the Study Area, and two large ponds occur in the northern portion along the intermittent Green Spring Creek. The average annual precipitation for the Study Area is 33.88 inches (WRCC 2021).

The Study Area is primarily composed of undeveloped land. One uninhabitable old homestead and associated outbuildings is present within the northern portion of the Study Area near the ponds and several private, low-use dirt roads occur scattered throughout the Study Area.

The majority of the Study Area supports oak woodland composed chiefly of valley oaks (*Quercus lobata*), live oaks (*Quercus wislizenii*), and blue oaks (*Quercus douglasii*). The understory consists of dogtail grass (*Cynosurus echinatus*), wild oats (*Avena* sp.), rip-gut brome (*Bromus diandrus*), medusa head (*Elymus caput-medusae*), and soft chess (*Bromus hordeacious*).

The annual brome grasslands are dominated by rip-gut brome, medusa head, and soft chess. Other associated species include yellow start-thistle (*Centaurea solstitialis*), Mediterranean barley (*Hordeum murinum*), and split-leaf geranium (*Geranium dissectum*). Some patches of the annual brome grassland support a diverse suite of native forbs, including hyacinth brodiaea (*Triteleia hyacinthina*), Valley sky lupine (*Lupinus nanus*), blue dicks (*Dichelostemma capitatum*), and field popcorn flower (*Plagiobothrys fulvus*).

The study area also encompasses several water features supporting plant communities dominated by hydrophytic macrophytes. These are discussed in greater detail below.

The majority of the Study Area generally drains to the north/northeast into Green Spring Creek. Green Spring Creek, which traverses the northern portion of the Study Area from east to west, is tributary to Folsom Lake by way of New York Creek. The southwestern corner of the Study Area appears to drain to the south and into Allegheny Creek, which is also a tributary to Folsom Lake by way of Green Spring Creek and New York Creek, respectively.

A total of 7.444 acres of aquatic resources including seasonal wetland, seasonal wetland swale, seep, ephemeral drainage, intermittent drainage, pond, and roadside ditch have been mapped within the Study Area (**Figure 2**) (Madrone 2021).

**Table 1. Waters of the U.S. Mapped within the Study Area**

| Waters Type | Acreage |
|---|---|
| *Wetlands* | |
| Seasonal Wetland | 0.026 |
| Seasonal Wetland Swale | 2.138 |
| Seep | 0.394 |
| *Other Waters* | |
| Ephemeral Drainage | 0.245 |
| Intermittent Drainage | 0.811 |
| Pond | 3.803 |
| Roadside Ditch | 0.027 |
| **Total** | **7.444** |

## 1.4 Species Biology, Habitat, and Distribution

CRLF was federally listed under the Endangered Species Act as threatened on June 24, 1996 (USFWS 1996). Among the native frog species of the western United States, CRLF is the largest (Wright and Wright 1949), measuring 1.5 to 5.1 inches (in) in length (Stebbins 2003). Adult individuals are characterized by prominent dorsolateral folds on their back region with spots that have light centers (Stebbins 2003). Individual frogs typically have red or orange abdomens and hind legs, with small black flecks and irregular dark blotches with brown, gray, olive or reddish indistinct outlines across the dorsal surface. Larval body lengths range from 14 to 80 millimeters (mm) (0.6 to 3.1 in) with a body background color of dark brown or olive green, to yellow with dark spots (Storer 1925).

CRLF habitat is characterized by riparian vegetation associated with slow-moving water that is relatively deep (>0.7 meters [m]). Emergent and edge vegetation requirements are highly variable and include willow (*Salix* sp.), cattails, and bulrushes (*Schoenoplectus* spp.) providing appropriate habitat (Jennings and Hayes 1994). Adults can be found in both ephemeral and perennial streams and ponds; although stable populations require permanent freshwater (salinity ≤4.5%) water sources for the larval life stage (Jennings and Hayes 1994). Riparian vegetation and mammal burrows near water sources also provide refuge to estivating adults (USFWS 1996). Adults may utilize mammal burrows, desiccation cracks on pond bottoms, or dense vegetation and debris piles when aquatic breeding habitat dries (Alvarez 2004).

Adults breed from November through March, with females laying 500 to 5,000 eggs within large, gelatinous egg masses attached to submergent or emergent vegetation (Alvarez et al. in press). Eggs hatch 6 to 14 days after deposition, with larvae undergoing metamorphosis 3.5 to 7 months after hatching. Eggs and larvae are intolerant of salinity, with egg mortality reaching 100 percent in water with

salinity levels greater than 4.5 parts per thousand (ppt), and larvae when exposed to salinity levels higher than 7 ppt (USFWS 1996).

The range of CRLF historically occurred in 46 counties throughout California, including areas of the Central Valley floor, Sierra Nevadan foothills, and Coast Ranges. Historically, the species extended as far north as Shasta County and down to Baja California in the southern end of its range (Jennings and Hayes 1994). Currently, CRLF is found in 22 counties, with significant populations found in coastal drainages between Point Reyes (Marin County) and Santa Barbara (Santa Barbara County) (Jennings and Hayes 1994). CRLF intergrades with northern red-legged frog (*Rana aurora*) in Mendocino County, CA (Hayes and Miyamoto 1984, Shaffer et al. 2004). CRLF have been extirpated from almost the entire Central Valley with some populations remaining in the Tracy/Mountain House area. There are very few extant populations of CRLF remaining within the Sierra Nevada Foothills. The nearest population to the Study Area is near Pollock Pines in El Dorado County and in the town of Michigan Bluff in Placer County. These populations are over 20 miles east and northeast of the Study Area (**Figure 3**).

### 1.5 Critical Habitat

On 17 March 2010, USFWS published a final rule revising the designation of Critical Habitat for CRLF [Federal Register Vol. 75, No. 51:12816]. Critical habitat was designated in 22 counties within California, for a total of ±1,636,609 acres (662,312 hectares).

Based upon the current knowledge of the life history, biology, and ecology of CRLF, Critical Habitat requires the following Primary Constituent Elements (PCEs):

1. *Aquatic Breeding Habitat:* Standing bodies of fresh water (with salinities less than 4.5 ppt), including natural and manmade (e.g., stock) ponds, slow-moving streams or pools within streams, and other ephemeral or permanent water bodies that typically become inundated during winter rains and hold water for a minimum of 20 weeks in all but the driest of years.
2. *Aquatic Non-Breeding Habitat:* Freshwater pond and stream habitats, as described above, that may not hold water long enough for the species to complete its aquatic life cycle but which provide for shelter, foraging, predator avoidance, and aquatic dispersal of juvenile and adult California red-legged frogs. Other wetland habitats considered to meet these criteria include, but are not limited to: plunge pools within intermittent creeks, seeps, quiet water refugia within streams during high water flows, and springs of sufficient flow to withstand short-term dry periods.
3. *Upland Habitat:* Upland areas adjacent to or surrounding breeding and non-breeding aquatic and riparian habitat up to a distance of 1 mi (1.6 km) in most cases (i.e., depending on surrounding landscape and dispersal barriers) including various vegetational types such as grassland, woodland, forest, wetland, or riparian areas that provide shelter, forage, and predator avoidance for the California red-legged frog. Upland features are also essential in that they are needed to maintain the hydrologic, geographic, topographic, ecological, and edaphic features that support and surround the aquatic, wetland, or riparian habitat. These upland features contribute to: (1) Filling of aquatic, wetland, or riparian habitats; (2) maintaining suitable periods of pool inundation for larval frogs and their food sources; and (3) providing non- breeding, feeding, and sheltering habitat for juvenile and adult frogs (e.g., shelter, shade, moisture, cooler temperatures, a prey base, foraging opportunities, and areas for predator avoidance). Upland habitat should include structural features such as boulders, rocks and organic debris (e.g., downed trees, logs), small mammal burrows, or moist leaf litter.

4. *Dispersal Habitat:* Accessible upland or riparian habitat within and between occupied or previously occupied sites that are located within 1 mi (1.6 km) of each other, and that support movement between such sites. Dispersal habitat includes various natural habitats, and altered habitats such as agricultural fields, that do not contain barriers (e.g., heavily traveled roads without bridges or culverts) to dispersal. Dispersal habitat does not include moderate- to high-density urban or industrial developments with large expanses of asphalt or concrete, nor does it include large lakes or reservoirs over 50 ac (20 ha) in size, or other areas that do not contain those features identified in PCE 1, 2, or 3 as essential to the conservation of the species.

## 2.0 METHODS

The site assessment followed guidance provided in USFWS' *Revised Guidance on Site Assessments and Field Surveys for the California Red-Legged Frog* (USFWS 2005).

Prior to the field site assessment, a review of the known records of the species was conducted. The California Natural Diversity Database's (CNDDB's) Biogeographic Information and Observation System online mapping tool (CDFW 2021) was used to identify records of CRLF within 1.0 mile (1.6 km) of the Study Area, which represent known occurrences in the vicinity of the Study Area. Records within 3.1 miles (5 km) of the Project site were also identified, as recommended in the Protocols in order to place the Project site in a regional perspective.

The habitat assessment was conducted on 5 November 2021 by Madrone biologist Dustin Brown. See **Attachment A** for surveyor qualifications. On-site aquatic habitats and adjacent uplands were evaluated for their potential to support breeding, foraging, dispersal and refugia or aestivation habitat. During the site visit, all wetlands located within the Study Area were visited and assessed for the potential to provide suitable aquatic habitat for CRLF. Habitat assessments were completed for aquatic features that could potentially pond water through the spring and early summer, as well as adjacent uplands surrounding such aquatic features. Three aquatic features within the Study Area were determined to pond for extended periods, and as such, were evaluated during field surveys: Pond 1, Pond 2, and Seep 4 (**Figure 4**). Field-based habitat assessments were conducted by walking the perimeter of the wetland features and through adjacent upland areas. Variables observed and recorded included habitat type, size, approximate depth, substrate, location, plant assemblages, presence of potential refugia, and general hydrology notes.

Potential aquatic habitats for CRLF within 1.0 mile of the Study Area were also assessed for potential to provide suitable habitat to CRLF. The off-site areas were assessed via aerial photograph as these areas were on private property.

## 3.0 RESULTS

### 3.1 Range and Critical Habitat

The Study Area is located within the current range of CRLF. There is no critical habitat for CRLF within 3.1 miles of the Study Area. The nearest Critical Habitat (Unit ELD-1) is located approximately 20 miles east of the Study Area (**Figure 3**).

### 3.2 Documented Occurrences

There are no documented occurrences of CRLF within 3.1 miles of the Study Area. There is one unverified observation of CRLF located approximately 2.6 miles northwest of the Study Area along Folsom Lake (CNDDB Occurrence Number 814). This observation consists of a single "red" frog observed jumping off of a pedestrian bridge into a creek. Biologists have searched this area in order to determine whether there is a population of CRLF in the vicinity but no CRLF have been observed (CDFW 2021). There are two occurrences of CRLF (CNDDB Occurrence Numbers 1284, 1317, and 1377) located approximately 14 miles northeast and southeast of the Study Area. There is a large known population of CRLF located within the town of Michigan Bluff (CNDDB Occurrences 446 and 890) approximately 25 miles northeast of the Study Area. There is a known population of CRLF located within Webber Creek and Spivey Reservoir (CNDDB Occurrence Number 586) approximately 22 miles east of the Study Area (CNDDB 2021)(**Figure 3**).

### 3.3 On-Site Habitat

There are three aquatic resources (Pond 1, Pond 2, and Seep 4) within the Study Area that represent potential aquatic breeding habitat for CRLF. Green Spring Creek (intermittent drainage) within the Study Area represents potential dispersal habitat for CRLF. Please see below for descriptions of each of the aquatic features that were included in this assessment. See **Figure 4** for locations of these features and see **Attachment B** for photographs of each feature. See **Attachment C** for site assessment data forms for each feature.

#### *3.3.1 Pond 1*

Pond 1 is located along Green Spring Creek within the northern portion of the Study Area. This pond is an in-stream stock pond that was manmade and contains an earthen dam with a rock and mortar spillway. The surface area of this pond is approximately 500 feet by 200 feet at maximum inundation and maximum depth is approximately 8 feet. Emergent vegetation is abundant, covering approximately 30 percent of the surface, and consists of bullrush. Approximately 20 percent of the shoreline along the southeast bank is vegetated with blackberry brambles and the rest of the shoreline is vegetated by annual grasses and forbs. Pond 1 is surrounded by annual grassland that is cattle grazed. This feature was full at the time of the survey and was being fed by Green Spring Creek at a rate of approximately 0.5 cubic feet per second. The water was clear and no fish or turtles were observed within the pond. No wading birds were foraging in Pond 1 as this feature dried in the summer and fall of 2021 and no fish are present. Signs of recent high flashy flows were observed along the northern shore of this pond. It appeared that the large storm in mid-October that dropped over seven inches of rain in two days caused the creek to flow at a very high rate and raise the level of the pond by as much as three feet above the ordinary high water mark. This pond appears to be semi-perennial and dries during below average rain years.

#### *3.3.2 Pond 2*

Pond 2 is located along Green Spring Creek approximately 50 feet downstream of Pond 1. Similar to Pond 1, Pond 2 is an in-stream stock pond that was manmade and contains an earthen dam with a spillway. Surface area of this pond is approximately 450 feet by 160 feet at maximum inundation and maximum depth is approximately 10 feet. Emergent vegetation is moderately abundant covering approximately 25 percent of the surface and consists of bullrush and young willows. Approximately 60 percent of the shoreline is vegetated with bullrush, 20 percent is vegetated with blackberry brambles, and the rest of the shoreline is vegetated by annual grasses and forbs. Pond 2 is surrounded by annual grassland and oak

savannah that is cattle grazed to the south and east and a strawberry farm and rural residential properties to the north and west. This feature was full at the time of the survey and was being fed by Green Spring Creek at a rate of approximately 0.5 cubic feet per second. The water was clear and mosquito fish (*Gambusia affinis*) was observed within the pond. Also, a great blue heron (predatory wading bird) was observed foraging in Pond 2 meaning that fish are present. This pond appears to be perennial and may support predatory game fish.

### *3.3.3 Seep S-4*

Seep S-4 is located within the northeastern portion of the Study Area along an ephemeral drainage situated within an oak savannah. This seep is a natural feature that has been excavated to form a perennial pool. Stacked stone was used to create a spring box and the box also contains a dilapidated timber and corrugated steel covering. Surface area is approximately 8 feet by 12 feet at maximum inundation and maximum depth is approximately 3 feet. No vegetation was observed in the seep. This feature was observed to contain water during the summer of 2021 (very dry year) and is likely perennial. The seep is also used to supply water to cattle troughs approximately 70 feet downstream of the seep. The seep represents potential CRLF breeding and dispersal/refugia habitat.

### *3.3.4 Intermittent Drainage - Green Spring Creek*

Green Spring Creek within the Study Area is a rocky seasonal stream that flows during the rainy season and for portions of the spring and early summer. Its likely dries by mid to late summer. This creek contains riffle and run habitats with no main channel pools or thick riparian vegetation. Flows within Green Spring Creek are likely flashy during rain events. No suitable CRLF breeding or refugia habitat was observed within Green Spring Creek within the Study Area. This creek may serve as migration/dispersal habitat for CRLF.

### *3.3.5 Other Aquatic Resources*

Other aquatic resources located within the Study Area include seasonal wetlands, seasonal wetland swales, seeps, ephemeral drainages, and roadside ditches. These features were assessed for the potential to provide aquatic habitat, be it breeding, refugia, or dispersal habitat, for CRLF. The other aquatic resources within the Study Area are very shallow and do not contain water for long enough periods to provide suitable aquatic habitat for CRLF.

## 3.4 Off-Site Habitat

Potential habitat for CRLF within 1-mile of the Study Area was identified by aerial photograph. A total of eight aquatic features representing potential breeding habitat or dispersal habitat for CRLF were identified within 1.0 mile of the Study Area. These features consist of six ponds representing potential breeding habitat for CRLF and two streams (including Green Spring/New York Creek) representing potential CRLF dispersal habitat. There do not appear to be any barriers present between these aquatic features and the Study Area. Please see **Figure 5** for locations of potential off-site CRLF habitat.

### 3.5 Barriers to Dispersal

There are no natural or manmade barriers for CRLF dispersal within the Study Area. The nearest potential barrier is Green Valley Road located just north of the Study Area. This two-lane road may limit the dispersal of CRLF, but it is not a complete barrier and individual CRLF could cross the road.

## 4.0 CONCLUSION

Suitable aquatic breeding habitat for CRLF was observed within the two onsite ponds and within Seep S-4 within the Study Area. Also, Green Spring Creek within the Study Area represents suitable dispersal habitat for CLRF. Although no CRLF were observed within the Study Area during the survey these features in theory could support the species.

In past biological surveys of these ponds, predatory species such as Centrarchids (*Lepomis* sp.) and American bull frog (*Lithobates catesbeianus*) were observed within the ponds, which may reduce the potential for CRLF to be present.

Even though there is potentially suitable habitat for CRLF within the Study Area, there are no known or verified populations of CRLF within 3.1 miles of the Study Area. The nearest observation along Folsom Lake is unverified and is likely not a viable population. The nearest viable breeding populations of CRLF to the Study Area are all over 2,000 feet in elevation (substantially higher than the Study Area) and are over 15 miles away.

In conclusion, while the Study Area contains potential habitat for CRLF, the presence of bullfrogs and predatory game fish and the distance from the Study Area to verified populations of CRLF, means that the likelihood of CRLF being present within the Study Area is low.

## 5.0 REFERENCES


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# Figures

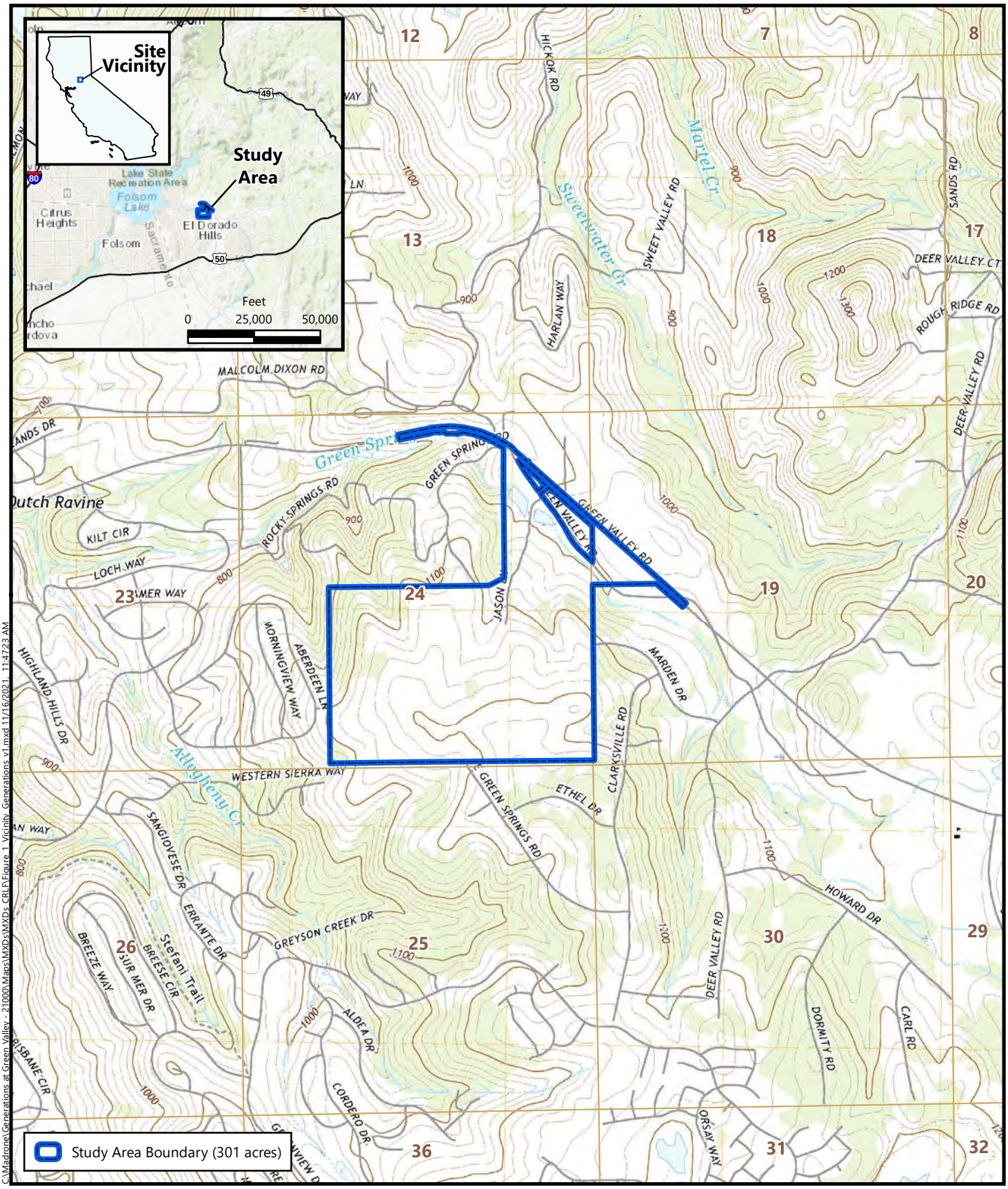
Figure 1. Site and Vicinity

Figure 2. Aquatic Resources

Figure 3. California Natural Diversity Database Occurrences

Figure 4. On-Site California Red-Legged Frog Habitat

Figure 5. Off-Site California Red-Legged Frog Habitat




C:\Madrone Generations at Green Valley - 21000\Maps\MXDs\MXDs CRLF\Figure 1 Vicinity Generations v1.mxd 11/16/2021 11:47:23 AM

Source: United States Geologic Survey, 2018.
"Clarksville, California" 7.5-Minute Topographic Quadrangle
Section 24, Township 10 North, Range 8 East, and
Section 19, Township 10 North, Range 9 East, MDB&M
Longitude -121.045833, Latitude 38.705900

**Figure 1**
**Site Vicinity**

*Generations at Green Valley*
*El Dorado County, California*

MADRONE ECOLOGICAL CONSULTING

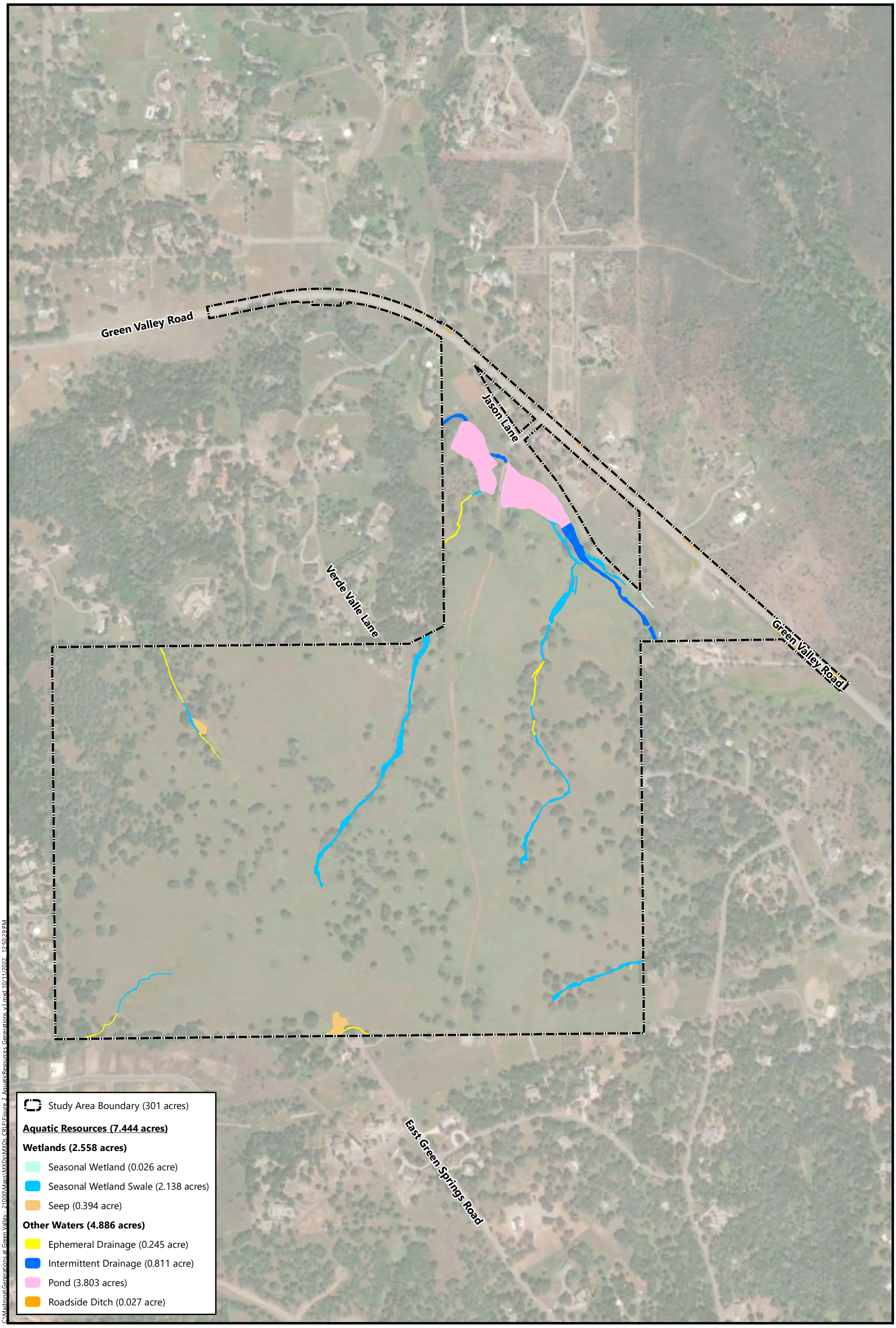
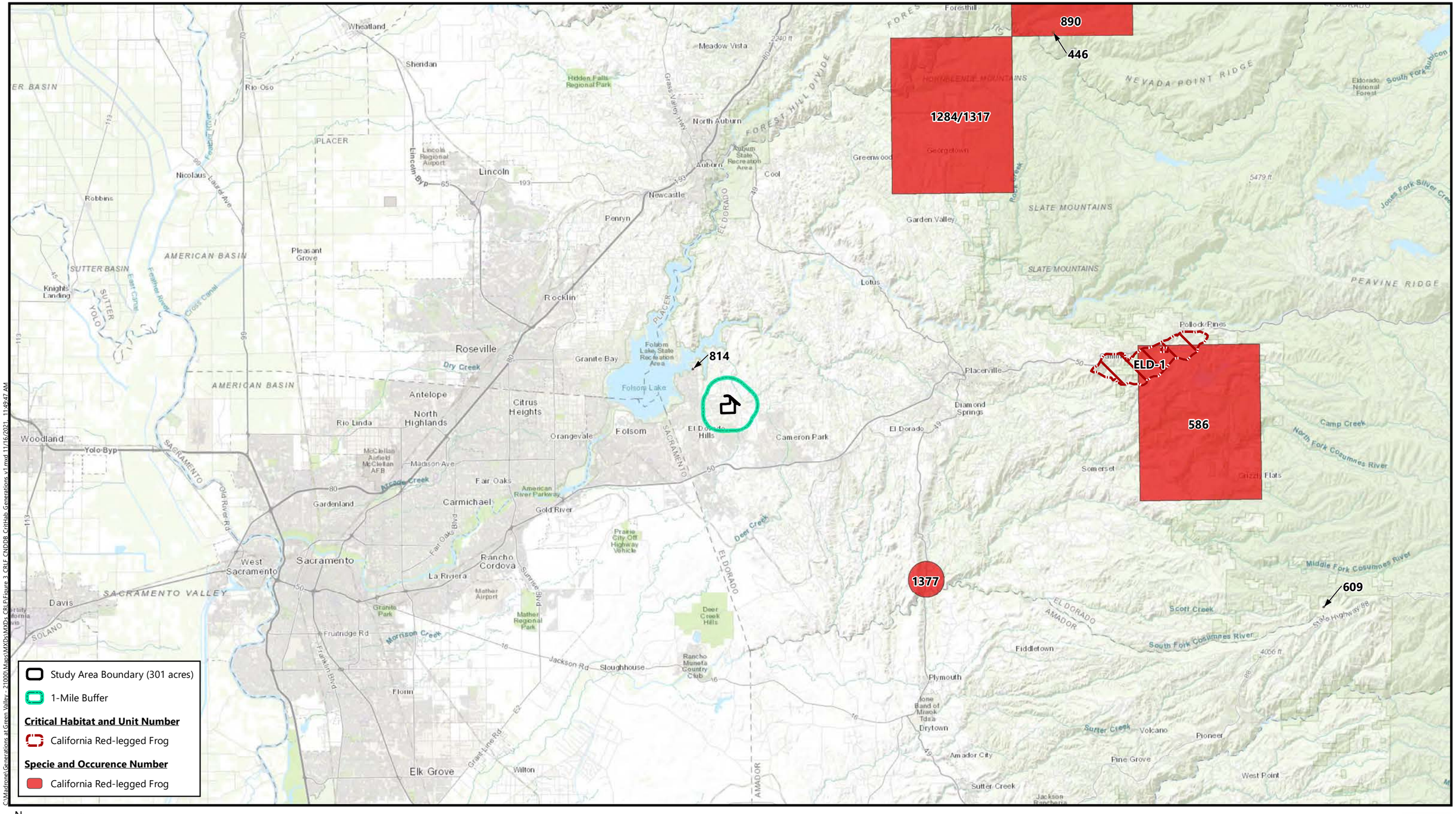



**Figure 2**
**Aquatic Resources**

*Generations at Green Valley*
*El Dorado County, California*

MADRONE ECOLOGICAL CONSULTING

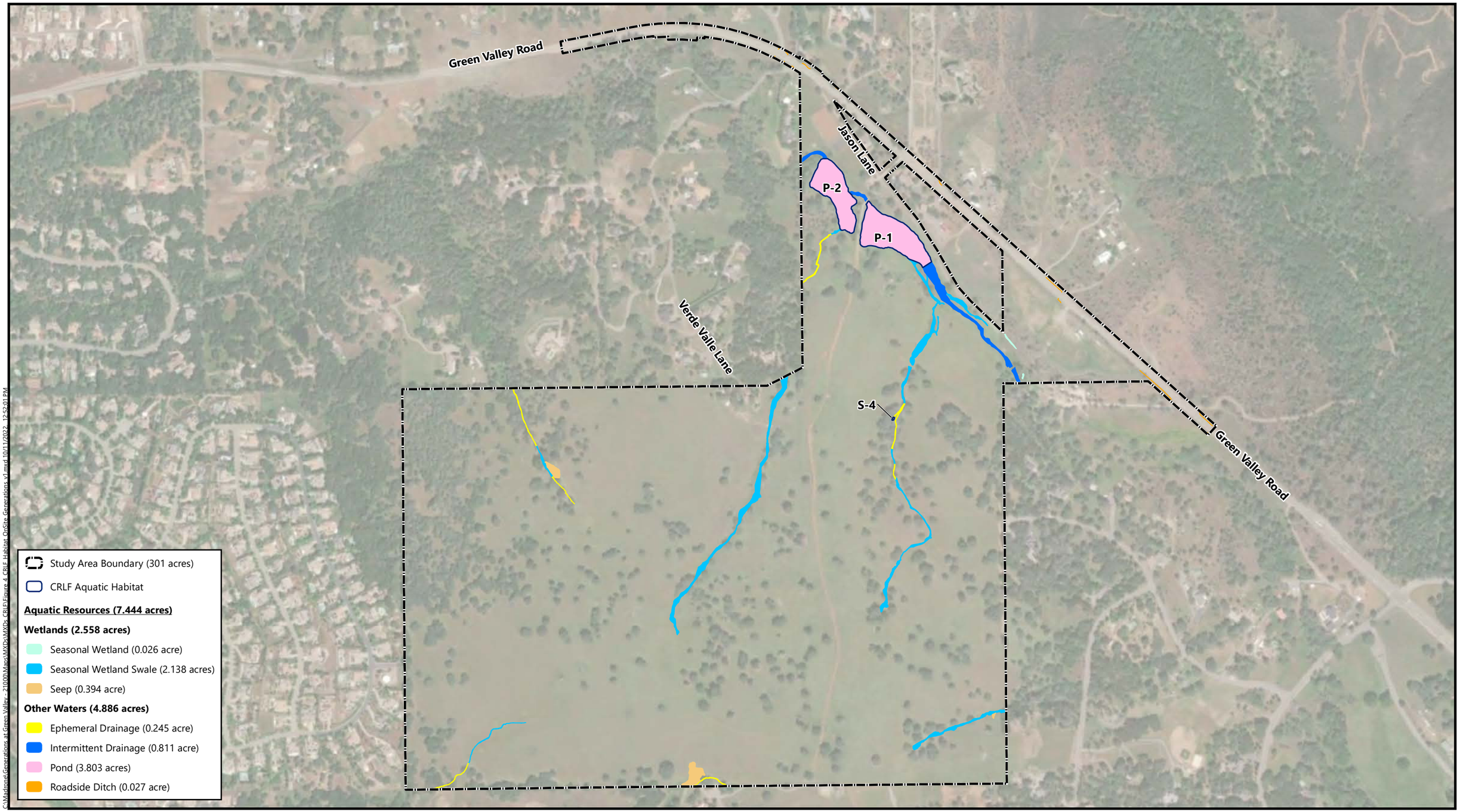
**Aerial Source:** Maxar, 1 May 2022.




**Source:** *California Department of Fish and Wildlife,* November 2021.
**Basemap Source:** *National Geographic* and *ESRI*

**Figure 3**
**California Natural Diversity Database Occurrences of California Red-legged Frog and California Red-legged Frog Critical Habitat**
*Generations at Green Valley*
*El Dorado County, California*

MADRONE ECOLOGICAL CONSULTING

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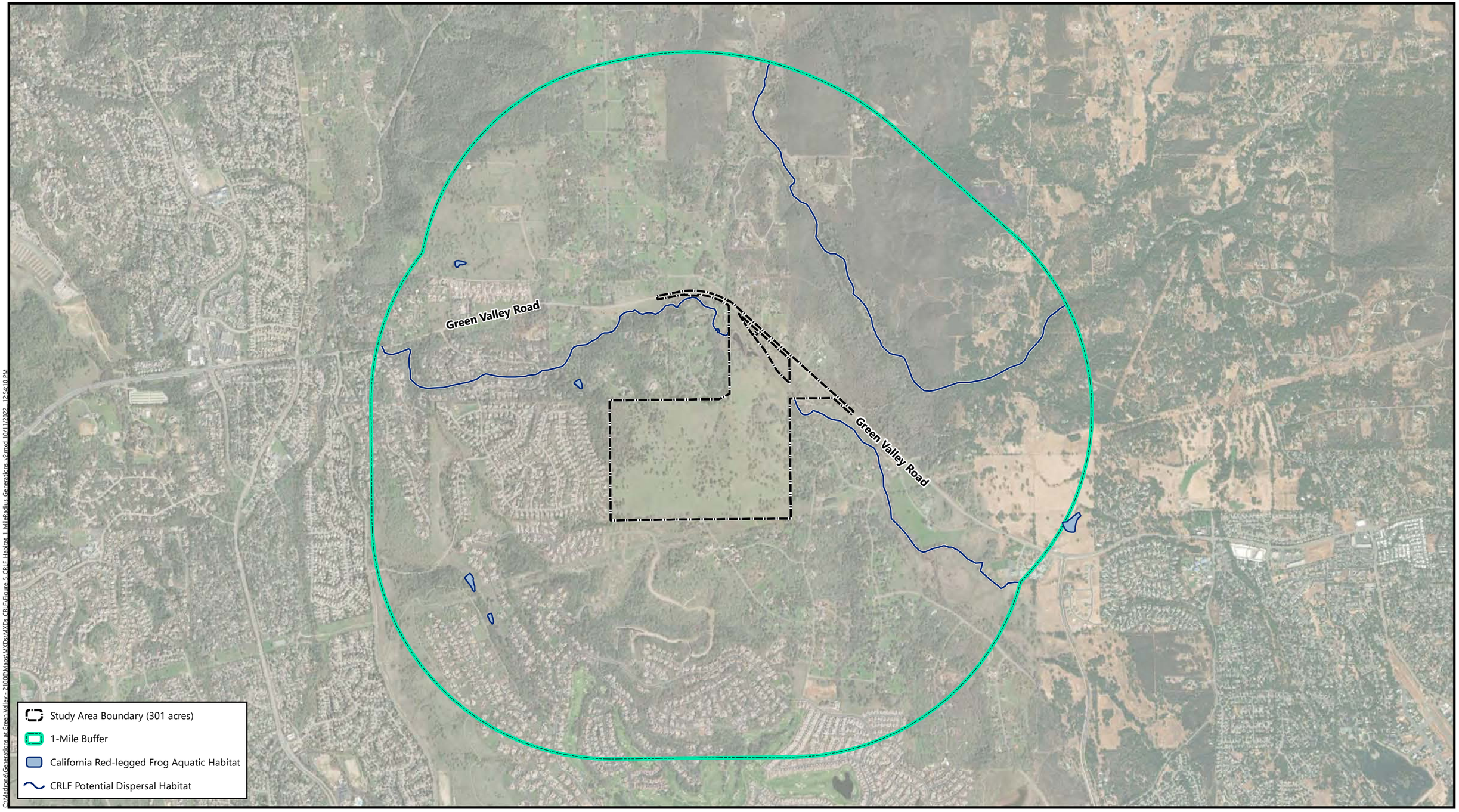
**Aerial Source:** Maxar, 1 May 2022.

**Figure 4**
**California Red-legged Frog Habitat within the Study Area**

*Generations at Green Valley*
*El Dorado County, California*

MADRONE ECOLOGICAL CONSULTING




G:\Madrone\Generations at Green Valley - 21000\Maps\MXDs\MXDs_CRLF\Figure 5_CRLF Habitat 1 Mile\Arlis Generations_v2.mxd 10/11/2022, 12:54:10 PM

**Aerial Source:** Maxar, 1 May 2022.

**Figure 5**
**California Red-legged Frog Habitat within 1-Mile of the Study Area**

*Generations at Green Valley*
*El Dorado County, California*

MADRONE ECOLOGICAL CONSULTING

# Attachments

Attachment A:  Qualifications of Surveyor

Attachment B:  Representative Site Photographs

Attachment C:  Habitat Assessment Data Form

# Attachment A

**Qualifications of Surveyor**

**Surveyor Qualifications**

**Dustin Brown**

Dustin Brown has more than 14 years of professional experience working as a consultant to both public agencies and the private sector, and has served as biologist for permitting and environmental assessment projects. He has conducted wildlife studies for a variety of terrestrial and aquatic species, including numerous studies involving federally and/or State-listed threatened and endangered wildlife species. Mr. Brown has conducted numerous biological resource investigations, habitat assessments, and jurisdictional wetland delineations for proposed projects. He routinely assesses existing biological resource databases and on-site survey data to evaluate potential impacts to special-status species including federal and/or state listed species, U.S. Forest Service Sensitive species, CNPS listed species, migratory bird species, and regionally sensitive species protected under local ordinances. These assessments often include the development of detailed study plans, developing and implementing literature and field studies, data acquisition, data analysis, impact assessments, mitigation planning, and other environmental documentation.

Mr. Brown has conducted studies and developed permits to meet the regulatory requirements of the federal Clean Water Act (Sections 404 and 401), the federal Endangered Species Act (Section 7 and Section 10), the California State Endangered Species Act (2050-2068, 2081), and the California Fish and Game Code Section 1602 governing activities that may affect fish and wildlife habitats associated with streams and lakes. He has developed several Biological Assessments per the USFWS and NOAA/NMFS guidelines and has worked on a variety of CEQA and NEPA documents including numerous NegDEC's, EIR's, EIS's, and EA's.

## California Tiger Salamander

Mr. Brown was authorized under U.S. Fish and Wildlife Service 10(a)(1)(A) Permits TE-012973 and TE-48210A-1 to independently conduct CTS surveys and has personally conducted approximately 190 hours of CTS sampling and personally handled thousands of CTS larvae and over 89 juvenile and adult CTS

Mr. Brown has conducted protocol-level CTS habitat assessments on over ten properties in Calaveras, San Joaquin, Sacramento, Yolo, Stanislaus, Sonoma, San Benito, and Contra Costa Counties.

## California Red-legged Frog

Mr. Brown was authorized under U.S. Fish and Wildlife Service 10(a)(1)(A) Permits TE-012973 and TE-48210A-1 to independently conduct CRLF surveys and has personally conducted approximately 60 hours of CRLF sampling and personally handled and observed approximately 62 CRLF larvae, 345 metamorph, 105 juveniles, and 45 adult CRLF.

Mr. Brown has conducted protocol-level habitat assessments for CRLF on over 10 properties in Placer, El Dorado, Calaveras, Sacramento, Sonoma, Marin, Monterey, San Ramon, Alameda, and Contra Costa Counties.

# Attachment B

**Representative Site Photographs**




Facing northwest at Pond 1




Facing northwest at Pond 2




Facing southwest at Pond 2




Facing southeast at intermittent drainage (ID-2) that flows into Pond 1 - Potential CRLF Dispersal Habitat




Facing west at intermittent drainage (ID-3) that flows between Pond 1 and Pond 2 – Potential CRLF Dispersal Habitat




Facing east at the upland within the central portion of the Study Area on 5 November 2021




Facing south at Seep S-4 – Potential CRLF Aquatic Habitat




Facing north at Seep S-4 – Potential CRLF Aquatic Habitat



Facing East at Seep S-2 (western portion of the Study Area) on 19 February 2021 – Not suitable CRLF Aquatic Habitat

# Attachment C

**Habitat Assessment Data Form**

**Appendix D.**
**California Red-legged Frog Habitat Site Assessment Data Sheet**

**Site Assessment reviewed by** _____ _____ _____
(FWS Field Office) (date) (biologist)

**Date of Site Assessment:** 11/5/2021
(mm/dd/yyyy)

**Site Assessment Biologists:** Brown (Last name) Dustin (first name) _____ (Last name) _____ (first name)

_____ (Last name) _____ (first name) _____ (Last name) _____ (first name)

**Site Location:** El Dorado, Green Valley Road 1.25 mi. NW of Pleasant Grove middle school
**(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).**

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: Generations at Green Valley
Brief description of proposed action: Residential Development

1) Is this site within the current or historic range of the CRF (circle one)? (YES) NO

2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? YES (NO)
If yes, attach a list of all known CRF records with a map showing all locations.

## GENERAL AQUATIC HABITAT CHARACTERIZATION

*(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)*

**POND:** Pond 1 Pond 2

Size: 500'x200' 450'x160' Maximum depth: Pond 1: 8' Pond 2: 10'

Vegetation: emergent, overhanging, dominant species: See notes below.

Substrate: soil and bedrock (80%/20% respectively)

**Perennial or Ephemeral** *(circle one)*. If ephemeral, date it goes dry: _____

Pond 2 (downstream pond) is perennial and has mosquito fish. Bulrush along 60% of shoreline, Himalayan blackberry along 20% of shoreline. 10% of shoreline is lined with grasses. Surrounding land use includes strawberry farming and willow + rural residential to north and cattle-grazed oak woodland to the south. Depth is >10'.

Pond 1 (upstream pond) - This is a seasonal pond that has a max depth of approx. 8 feet at base flow. Observed evidence of filling to 11' in depth during last heave rains. 30% emergent vegetation (scirpus), blackberry along 20% of shore along dam and SE bank. The rest of the bank is vegetated by grasses.

**Appendix D.**

**California Red-legged Frog Habitat Site Assessment Data Sheet**

This pond is fed by an intermittent drainage that is currently flowing ≈0.5 cfs. No fish or turtles observed in pond. No wading birds observed at this pond (likely no fish present). Water is clear. Surrounding land use is grasslands + oak woodlands that are cattle-grazed.

**STREAM**:

Bank full width: _____

Depth at bank full: _____

Stream gradient: _____

Are there pools (circle one)? YES NO

If yes,

Size of stream pools: _____

Maximum depth of stream pools: _____

Characterize non-pool habitat: run, riffle, glide, other: _____

_____

_____

Vegetation: emergent, overhanging, dominant species: _____

_____

_____

Substrate: _____

_____

Bank description: _____

_____

_____

**Perennial or Ephemeral** *(circle one)*. If ephemeral, date it goes dry: _____

Other aquatic habitat characteristics, species observations, drawings, or comments:

Canada goose, mallard, western meadowlark, Anna's hummingbird, California quail, northern mockingbird, rattlesnake, Ca. towhee, red-winged blackbird, White-crowned sparrow, common gallinule, Wood duck, California scrub jay, Sierran chorus frog (calling in pond), great blue heron (Pond 2).

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs
3. Maps with important habitat features and species location

# Evaluation of Potential California Red-Legged Frog (*Rana aurora draytonii*) Habitat on the Dixon Ranch Subdivision Project El Dorado County, California




Prepared by:

**Eric C. Hansen**
Consulting Environmental Biologist
4200 N. Freeway Boulevard, Suite 4
Sacramento, CA 95834


For:

**Dixon Ranch Partners, LLC**
949 Tuscan Lane
Sacramento, California 95864

September 9, 2013

# Evaluation of Potential California Red-Legged Frog (*Rana aurora draytonii*) Habitat on the Dixon Ranch Subdivision Project, El Dorado County, California

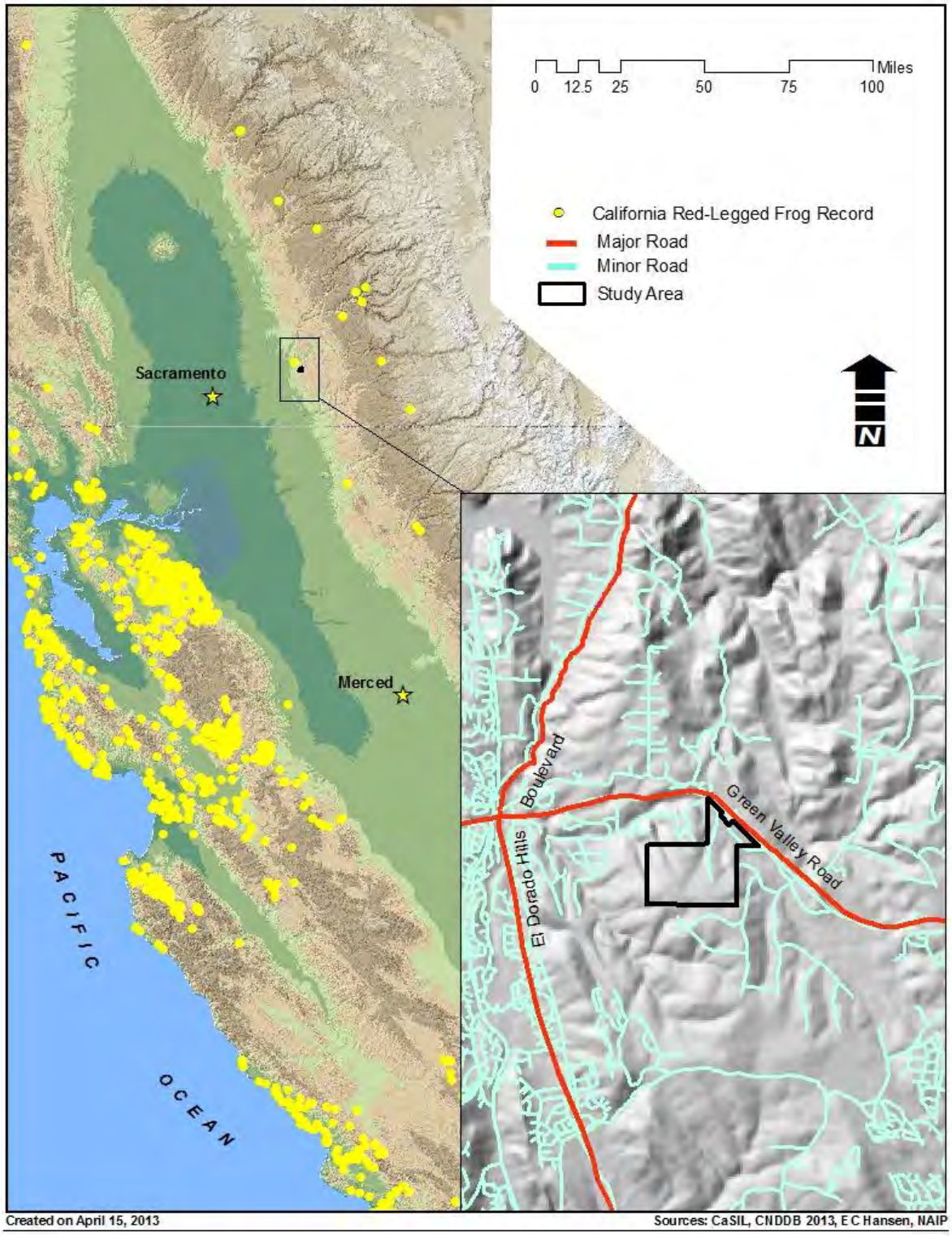
## INTRODUCTION

This report provides the results of California red-legged frog (*Rana aurora draytonii*) habitat suitability assessments on the Dixon Ranch Subdivision Project site (project site), located south of Green Valley Road in El Dorado County, California. A site visit was conducted for this purpose on 22 April 2013. The Louie Ponds consist of two contiguous impoundments situated in the Green Springs Creek corridor totaling approximately 3.8 acres in combined surface area. In order to provide an adequate regional perspective, an approximately 301-acre study area established during prior wetland delineations and rare plant species assessments (Gibson & Skordal 2011, 2012) were used to complete the assessment. The study area is located in Section 24, township 10 North, Range 8 East; Section 19, Township 10 North, Range 9 East, MDB&M, El Dorado County, California. The study area ranges from approximately 950-feet to 1240 feet in elevation, can be found at UTM 670,016 M E; 4,285,698 M N (Zone 10 North), and is portrayed on the Clarksville, California 7.5-Minute Series Topographic Quadrangle. Locator, vicinity, and detail maps are included in Figure 1 and Figure 2.

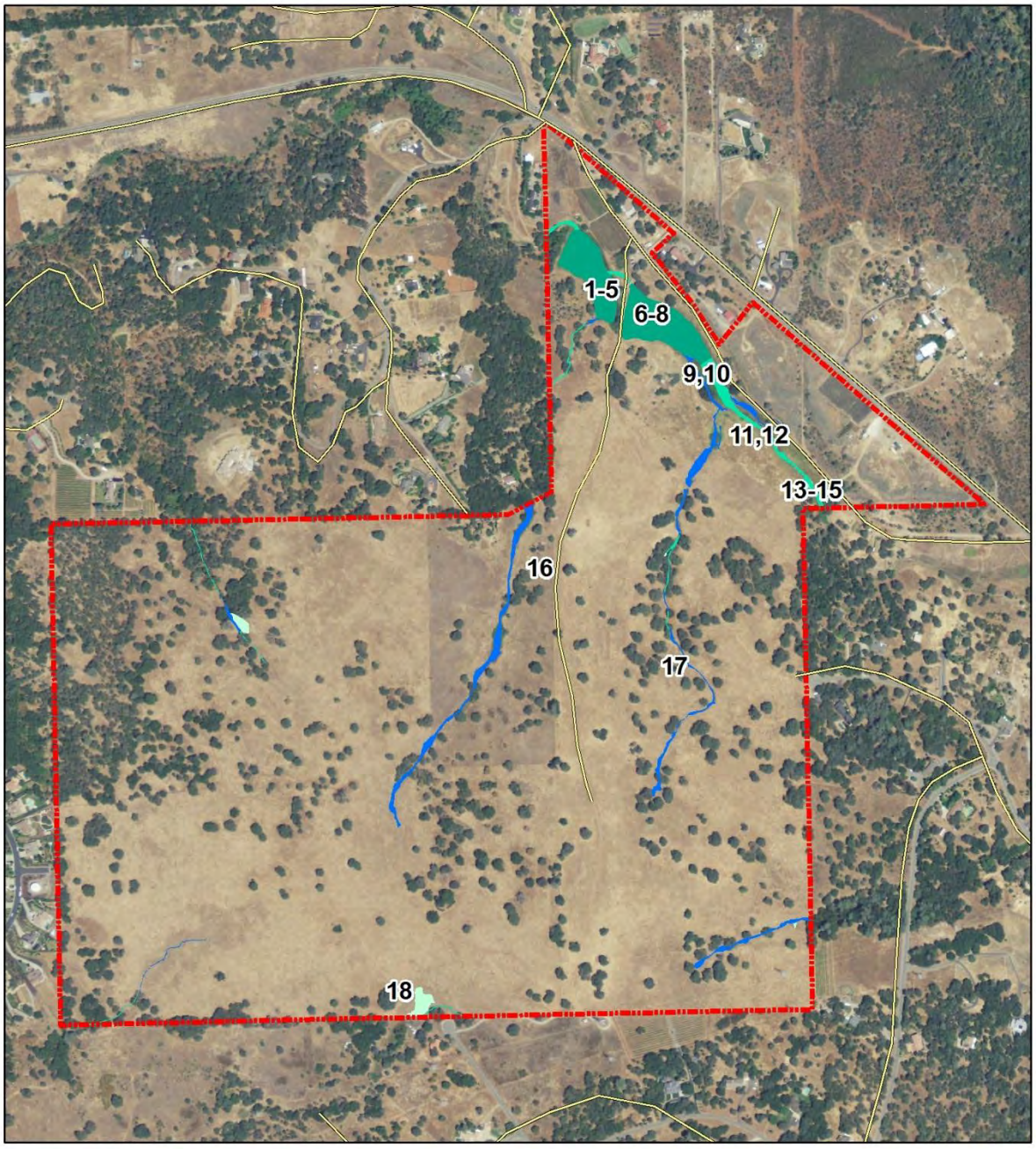
To access the site from Sacramento, drive east on Highway 50 into El Dorado County and exit to the north onto El Dorado Hills Boulevard, travel north on El Dorado Hills Boulevard, and then turn right onto Green Valley Road. Continue east on Green Valley Road until reaching West Green Springs Drive. The study area is located southeast of the West Green Springs Drive-Green Valley Road intersection. Existing or approved adjacent subdivisions include Green Springs Ranch to the east and southeast, Serrano to the southwest, and Highland View to the west.

The project site contains habitats suitable for California red-legged frogs, possessing both the aquatic and upland terrestrial habitats required by the species; however, the number of reported California red-legged frog occurrences in El Dorado County is low. No California red-legged frog locality records fall within one mile (1.6 km) of the project site Only one California red-legged frog locality record, consisting of one unverified juvenile frog (California Natural Diversity Database [CNDDB] Occurrence Number 814) falls within 2.8 miles (4.5 km) of the project site (CNDDB 2013). With the exception of the unverified juvenile frog reported near Folsom Lake, all California red-legged frogs recorded in this region of the Sierra Nevada occur above 2,000 feet, well above the approximately 1,050-foot mean elevation of the project site. While the project site contains habitat suitable for red-legged frogs, the presence of bullfrogs and predatory gamefish, distance from verified populations of red-legged frogs, and low site elevation relative to regional frog populations reduce the likelihood that red-legged frogs occur on the project site. The methodologies used to complete this assessment are presented below, and maps of regional species distribution are included as figures. Photographs of pertinent features and completed habitat assessment forms are included as Appendices A and B, respectively.

## FIGURE 1. VICINITY MAP



## FIGURE 2. STUDY AREA DETAIL AND KEY TO PHOTOGRAPHS



## HABITAT ASSESSMENT

### Legal Status

The California red-legged frog was federally listed as Threatened on June 24, 1996 and is designated as a California Species of Special Concern.

### Life History

This species is a lowland and foothill frog inhabiting moist environments from sea level to 2,440 meters (8,000 feet) (Stebbins 2003). It frequents the permanent cool waters of ponds, lakes, reservoirs, and streams offering dense shrubbery and emergent vegetation, such as cattails (*Typha* sp.), that provide cover and protection from predators. Red-legged frogs may disperse far from water to moist wooded areas following breeding. Individuals may engage in overland movements of up to 3.2 kilometers (2 miles) (Stebbins 2003).

The breeding period is short, often lasting only 1 to 2 weeks, usually from January to April, depending upon the locality and seasonal weather conditions. Larvae generally require 4 to 5 months to attain metamorphosis. Exotic species such as bullfrogs (*Lithobates catesbeianus*) and green sunfish (*Lepomis cyanellus*) compete with and prey upon red-legged frogs.

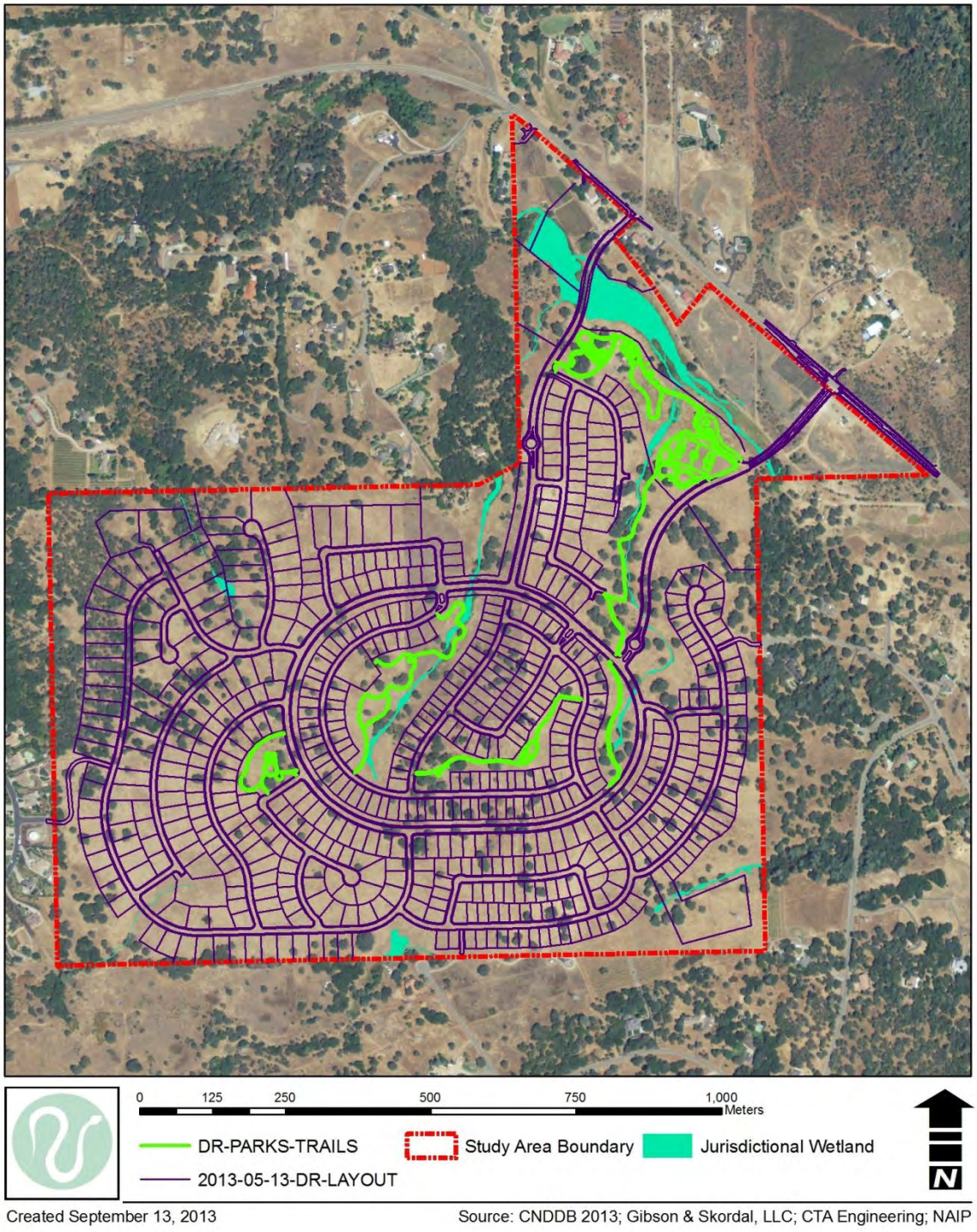
### Proposed Action

#### *Project Description*

The Dixon Ranch Project proposes to subdivide 280+/- acres into 444 single family detached residential units, 160 age-restricted single family detached units (age restricted to older adults), and includes retention of one existing single family residence for a total of 604 new units and one existing unit. The project includes preservation or creation of 84.1+/- acres (30%) of open space including parks, trails, landscaped lots, and native open spaces. The project includes on-site and off-site infrastructure to serve the development. Construction of a clubhouse for the age-restricted units is also proposed. Build-out will likely occur over many years, but ultimately will be dictated by market demands. The proposed development plan is shown in Figure 3.

Required project approvals include: a General Plan Amendment (File No. A11-0006); Zone Change (File No. Z11-0008); Planned Development (File No. PD11-0006); Tentative Map (File No. TM11-1505); annexation into the El Dorado Irrigation District; annexation into the El Dorado Hills Community Service District; and annexation into the El Dorado Hills County Water District (El Dorado Hills Fire Department).

**FIGURE 3. PROPOSED DEVELOPMENT PLAN**




Created September 13, 2013

Source: CNDDB 2013; Gibson & Skordal, LLC; CTA Engineering; NAIP

***General Plan Amendment Description***

The project is currently located entirely within the General Plan Community Region (urban limit line) of El Dorado Hills and is designated as Low Density Residential (LDR) land use, with the exception of 1.5+/- acres at the southeast corner of the property that is designated as Open Space (OS) and associated with the existing SMUD power transmission corridor. LDR allows for a maximum density of 1 dwelling unit per 5 acres. The proposed project is applying for a change in the land use designations on the site to High Density Residential (HDR) allowing for a density range of 1 to 5 units per acre; Medium Density Residential (MDR) allowing for a maximum of 1 dwelling unit per acre; and Open Space (OS). The proposed project is retaining the existing Low Density Residential (LDR) land use designation for the existing residence to remain.

***Planned Development Description***

The project is a planned development. Proposed uses within the project are as follows:

1) 444 single family detached residential units with lot sizes ranging from 5,775 sf to 3.32 ac

| Product Type | Qty | Land Use |
|---|---|---|
| Village Small Lot | 149 | HDR |
| Village Large Lot | 173 | HDR |
| Hillside | 54 | HDR |
| Hillside Custom | 58 | HDR |
| Estate Residential | 5 | MDR |
| Estate Residential Large Lot | 5 | MDR |
| | 444 | |

2) 160 age-restricted single family detached residential units with lot sizes ranging from 4,725 sf to 12,685 sf

| Product Type | Qty | Land Use |
|---|---|---|
| Age-Restricted Small Lot | 80 | HDR |
| Age-Restricted Large Lot | 80 | HDR |
| | 160 | |

3) One existing Low Density Residential (LDR) unit to remain.
4) One Clubhouse lot (Lot C)
5) One EID lot for a proposed pump station
6) Public and private roadways
7) 84.1+/- acres or 30% total open space, including native open space, parks and landscape lots.
    a. Includes 11.14 acres of Parks including:
        - One Village Park (Lot A)
        - One Neighborhood Park (Lot B)

### *Lighting*

Outdoor lighting in conformance with Section 17.14.170 of the County Ordinance Code is anticipated to be provided at major intersections, mid-block pedestrian crossings, along sag vertical curves where needed to establish adequate sight distance and as appropriate for public safety. Limited safety and security lighting and indirect shielded lighting will also be provided at park sites, gates and clubhouse including but not limited to parking areas, play areas, and walkways where appropriate. The project does not propose to use lighted ball fields or other light intensive uses at the proposed park sites.

## Existing Field Conditions

The project site is situated in the foothills of the Sierra Nevada on rolling to relatively flat terrain at an average elevation of about 1,050 feet. The project site is primarily used as pasturage and currentlycontains two habitable structures. Newer residential developments are located to the west while ranchettes occupy lands to the north and east. The site was very lightly grazed by cattle and horses at the time of field surveys.

The majority of the site generally drains to the north/northeast into Green Spring Creek. Green Spring Creek, which traverses the northern portion of the study area from east to west, is tributary to Folsom Reservoir by way of New York Creek. The southwestern corner of the parcel appears to drain to the south towards Allegheny Creek which is located outside of the study area boundary. Allegheny Creek is also tributary to Folsom Reservoir by way of Green Spring Creek and New York Creek, respectively.

## Methods

A field assessment was conducted on 22 April 2013 according to U.S. Fish and Wildlife Service (USFWS) guidelines (April 4, 1997 Memorandum 1-1-97-TA-1093 Dissemination of Interim Guidance on Site Assessment and Field Surveys for California Red-Legged Frogs; August 2005 Revised Guidance on Site Assessment and Field Surveys for California Red-Legged Frogs). These guidelines require that in assessing the likelihood that California red-legged frogs may occur at a given locale, information satisfying the following elements should be compiled and submitted to USFWS for further evaluation and guidance:

Element 1. Is the project within the current or historic range of the California red-legged frog?

Element 2. What are the known localities of California red-legged frog within the project site and within 1 mile (1.6 kilometers) (km) of the project boundaries? This is to place the project in regional perspective.

Element 3. What are the habitats within the project site and within 1 mile (1.6 km) of the project boundaries?

To satisfy these elements, first, California red-legged frog locality records were obtained by conducting a computer search of the most recent version of the CNDDB (2013). Next, to place the project in regional perspective, records falling within 1- and 30-mile (1.6 and 48.3-kilometer) radii of the project site were identified using the Geographic Information Systems (GIS) program ArcMap 9.2. GIS-generated maps are used to illustrate red-legged frog distribution relative to the project site (see Figure 1, Figure 3). Finally, habitats within and surrounding the project site were identified using a combination of site plans, field surveys, and GIS analysis using digitized USGS 7.5-minute topographic maps and digital orthographic quarter quadrangle (DOQQ) maps (digitized aerial maps) from the California Spatial Information Library (http://gis.ca.gov/).

While specific protocol level field surveys for California red-legged frogs were not conducted as part of this assessment, cursory field surveys for other special-status reptiles and amphibians were conducted incidental to this assessment, particularly for those species frequently associated with habitats favored by California red-legged frogs. Results are provided below.

**Results**

**Element 1 —** The project site is situated at the edge of the easterly extent of the California red-legged frog's historical range along the western slopes of the Sierra Nevada, which extends from Plumas County south to Tuolumne County (Jennings and Hayes 1994, CNDDB 2013).

**Element 2 —**The project site lies approximately 2.8 mile (4.5 km) from the (unverified) juvenile frog reported on the east side of Folsom Lake, southwest of Iron Mountain, 17.7 miles (28.5 km) from undisclosed localities in El Dorado County (Georgetown Quad), and 23.6 miles (40.0 km) from the other two verified populations of California red-legged frogs extant in this portion of the Sierra Nevada (Michigan Bluff area and Weber Creek) (CNDDB 2013). All other records documented within El Dorado County and adjacent Placer County fall more than 25 miles (40.2 km) from the project site; records are reported in Table 1 and are depicted in Figure 1 and Figure 4.

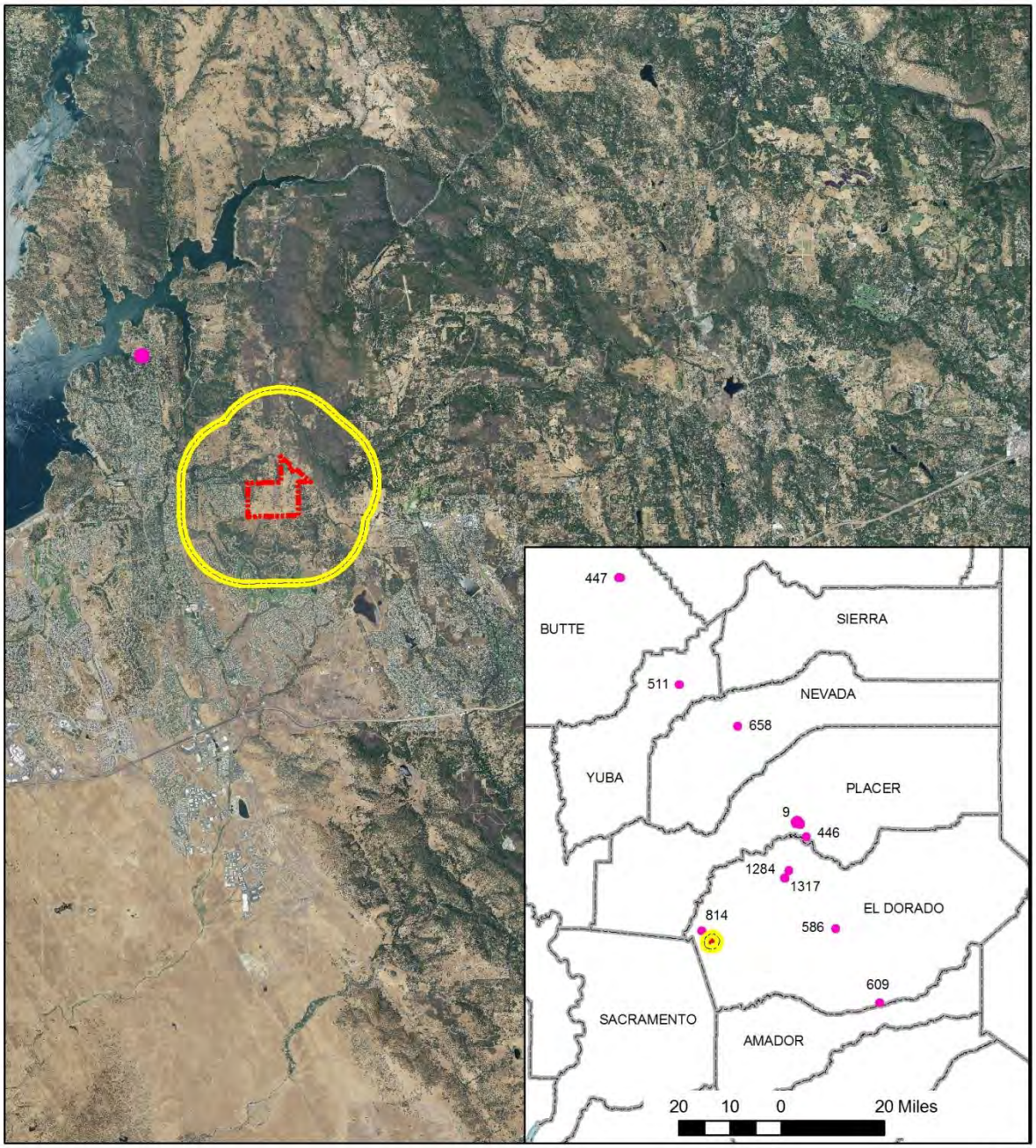
**Element 3 —** Habitats associated with Green Springs Creek possess both aquatic and upland characteristics suitable for California red-legged frogs. Aquatic habitats consist of interconnected streams, swales, and associated wetlands. Terrestrial habitats consist mostly of foothill oak woodland. Habitats are described in detail below. Photographs of selected site features are included in Appendix A.

**Table 1. CNDDB occurrence records within approximately 50 miles (80.5 km) of the project site**

| Occ. No. | USGS 7.5' Topographic Quadrangle | Township | Range | Section | County | Year Last Seen | Approx.Distance from Project Site | Elevation |
|---|---|---|---|---|---|---|---|---|
| 9 | Michigan Bluff | 14N | 11E | 21 | Placer | Pre-1951 | 28.6 mi | 3,400 ft |
| 446 | Michigan Bluff | 13N | 11E | 01 | Placer | 2001 | 26.7 mi | 3,200 ft |
| 511 | Challenge | 18N | 07E | 10 | Yuba | 2003 | 50.4 mi | 2,100 ft |
| 586 | Sly Park | 10N | 12E | 01 | El Dorado | 2002 | 23.6 mi | 3,200 ft |
| 609 | Caldor | 18N | 14E | 21 | El Dorado | 2002 | 34.4 mi | 4,200 ft |
| 658 | North Bloomfield | 17N | 09E | 27 | Nevada | 2007 | 42.3 mi | 3,050 ft |
| 814 | Clarksville | 10N | 08E | 10 | El Dorado | 2005 | 2.8 mi | 800 ft |
| 890* | Michigan Bluff | -- | -- | -- | Placer | 2006 | 28.9 mi | -- |
| 1284 | Georgetown | -- | -- | -- | El Dorado | 2009 | 19.3 mi | -- |
| 1317 | Georgetown | -- | -- | -- | El Dorado | 2009 | 17.7 mi | -- |

*Details for records displayed in red are suppressed in the commercial version of the CNDDB

## FIGURE 4. PROJECT SITE RELATIVE TO CNDDB OCCURRENCE RECORDS




Created May 10, 2013

Source: CNDDB 2013; NAIP

## Habitats within 1 mile (1.6 km) of the Project Site

### *Plant Communities*

Plant communities are described by Gibson & Skordal (2011). The study area encompasses several habitat types including non-native annual grasslands, foothill oak savannah/woodland, and numerous water features including agricultural ponds, intermittent and ephemeral drainages, seasonal wetlands, and seeps. The majority of the site supports oak savannah/woodland composed of valley oaks (*Quercus lobata*), live oaks (*Quercus wislizenii*), and blue oaks (*Quercus douglasii*).

The understory consists of dogtail (*Cynosurus echinatus*), wild oats (*Avena fatua*), rip-gut brome (*Bromus diandrus*), medusa head (*Taeniatherum caput-medusae*), and soft chess (*Bromus hordeaceus*). Interspersed between the oak woodlands/savannah are areas of non-native annual grasslands characterized by wild oats (*Avena fatua*), ripgut brome (*Bromus diandrus*), and medusa-head (*Taeniatherum caput-medusae*). Other common species include yellow start-thistle (*Centaurea solstitialis*), perennial rye grass (*Lolium perenne*), little quacking grass (*Briza minor*), soft chess (*Bromus hordeaceus*), prickly lettuce (*Lactuca serriola*), and split-leaf geranium (*Geranium dissectum*).

### *Hydrology*

Wetland components are described by Gibson & Skordal (2012). Green Springs Creek and two in-channel impoundments referred to as the Louie Ponds represent the largest water features within the study area. Green Springs Creek and its associated ponds contained several inches of flowing water and supported thick growths of hardstem bulrush (*Scirpus acutus*), creeping spike rush (*Eleocharis macrostachya*), and narrow-leaf cattails (*Typha angustifolia*). Woody vegetation consisted of cottonwoods (*Populus fremontii*) and narrow-leaf willow (*Salix exigua*). Several wetland swale-seep complexes are located within the hillier southern portion of study area. Seeps are most often associated with sloping terrain and derived primarily from groundwater seepage in the winter and spring, while seasonal wetland swales represent vegetated linear sloping drainages that lack a defined bed and bank. Common species included Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), curly dock (*Rumex crispus*), perennial rye grass (*Lolium perenne*), water cress (*Rorippa nasturtium-aquaticum*), tall flat sedge (*Cyperus eragrostis*), and spiny-fruited buttercup (*Ranunculus muricatus*). Photographs of the individual features are provided in Appendix A.

### *Soils*

According to the April 1974, "**Soil Survey of El Dorado Area, California**," four soil map units occur within the study area: Auburn very rocky silt loam, 2-30 percent slopes (AxD), Auburn silt loam, 2-30 percent slopes (AwD), Placer diggings (PrD), and Serpentine Rock Land (SaF).

### *Observed Species*

Adult bullfrogs and juvenile Centrarchid fishes (*Lepomis* spp.) were observed within Green Springs Creek and the Louie Ponds; both species can compete with and prey upon red-legged frogs. Larval Western toad (*Bufo boreas*) and Sierran treefrog (Formerly *Pseudacris regilla* - Pacific Treefrog) were also observed, but neither are known to adversely affect red-legged frogs.

## SUMMARY

Permanent, suitable red-legged frog habitat is present on the project site within Green Springs Creek and the associated impoundment referred to as the Louie Ponds. Although drainage features on-site are characterized as ephemeral or intermittent, they also provide potential habitat for dispersing red-legged frogs when they are flowing or when they possess pooled water following winter and spring rains. Although no red-legged frogs were observed during the field surveys, there is ample supporting habitat on the project site.

Adult bullfrogs and juvenile Centrarchid fishes (*Lepomis* spp.) were observed within Green Springs Creek and Louie Pond, both of which can compete with and prey upon red-legged frogs. Larval Western toad (*Bufo boreas*) and Sierran treefrog (Formerly *Pseudacris regilla* - Pacific Treefrog) were also observed, but neither are known to adversely affect red-legged frogs.

The regional presence of California red-legged frogs remains unverified. A juvenile (unverified) California red-legged frog was reported in 2005 within 2.8 miles (4.5 km) of the Proposed Project from a drainage at the end of Fitch Way, on the east side of Folsom Lake, southwest of Iron Mountain and north of Highway 50 (CNDDB 2013), but no others are reported from the immediate vicinity. California red-legged frogs have been verified in recent years in El Dorado County in Weber Creek, near Placerville (early 1990s) (Miriam Green Associates 1996, CNDDB 2013), in southern Placer County near Georgetown, and in Placer County near Michigan Bluff, but no verified populations are reported within 17.7 miles (28.5 km) of the project site. With the exception of the unverified juvenile frog reported near Folsom Lake, all California red-legged frogs recorded in this region of the Sierra Nevada occur above 2,000 feet, well above the approximately 1,050-foot mean elevation of the project site.

In closing, while the project site contains habitat suitable for red-legged frogs, the presence of bullfrogs and predatory gamefish, distance from verified populations of red-legged frogs, and low site elevation relative to regional frog populations reduce the likelihood that red-legged frogs occur on the project site.

## REFERENCES

California Natural Diversity Database (CNDDB). Commercial Version, April 2013. Geographic Information Systems (GIS) data and computer printout of sensitive species records in California. California Department of Fish and Game, Natural Heritage Division, Sacramento, CA.

Jennings, R.M. and M.P. Hayes. 1994. Amphibian and reptile species of special concern in California. Final report submitted to the California Department of Fish and Game Inland Fisheries Division, Rancho Cordova, CA: Contract 8023. 255 pp.

Gibson & Skordal, LLC. 2011. Special Status Plant Species Evaluation, Dixon Ranch, El Dorado County, California. Prepared for Dixon Ranch Partners, LLC. Prepared August, 201.

Gibson & Skordal, LLC. 2012. Jurisdictional Delineation and Special Status Species Evaluation, Dixon Ranch, El Dorado County, California. Prepared for Dixon Ranch Partners, LLC. Prepared August, 2011 and revised May, 2012.

Stebbins, R.C. 2003. A field guide to western reptiles and amphibians. 3rd edition. Houghton Mifflin Co.

# Appendix A: Photographs



1. Outflow to lower pond (NW).



2. Lower pond (WNW).



3. Lower pond showing vegetation at center crossing (NW).



4. S side lower pond showing edge characteristics - center crossing in background (NNE).



5. S side of lower pond showing edge characteristics - center crossing in background (NW).



6. One of many adult bullfrogs observed in upper pond (east end).



7. Outflow from upper pond (E end) (SE).



8. Lower pond showing vegetation at center crossing (SE).



9. Gravel-bottomed channel of Green Springs Creek flowing into upper pond (NW). Hardstem bulrush in background.



10. Gravel-bottomed channel of Green Springs Creek flowing into upper pond (SE). Hardstem bulrush in background.



11. Overhanging vegetation (*Rubus* spp.) along the margin of Green Springs Creek (W).



12. Intermittent riffles along Greens Creek (ESE).



13. Green Springs Creek at the E end of the project site (WNW).



14. Green Springs Creek upstream of the E end of the project site (SE).



15. Western toad larvae in Green Springs Creek at the E end of the project site.



16. Seasonal wet swale at the W center of the project site (see Figure 2).



17. Seasonal wet swale at the E center of the project site (see Figure 2).



18. Depressional seeps at the southern edge of the project site (see Figure 2).

Appendix B

## California Red-legged Frog Habitat Site Assessment Data Sheet

**Site Assessment reviewed by**_____ _____ _____
**(FWS Field Office) (date) (biologist)**

**Date of Site Assessment:** 04/22/2013
**(mm/dd/yyyy)**

**Site Assessment Biologists:** Hansen, Eric _____
**(Last name) (first name) (Last name) (first name)**

_____ _____
**(Last name) (first name) (Last name) (first name)**

**Site Location:** **El Dorado County, Dixon Ranch Project, UTM 670,016 E; 4,285,698 N (Zone 10 N)**
**(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).**

**ATTACH A MAP** (include habitat types, important features, and species locations)**

**Proposed project name:** Dixon Ranch Subdivision Project
**Brief description of proposed action:** The Dixon Ranch Project proposes to subdivide 280+/- acres into 444 single family detached residential units, 160 age-restricted single family detached units (age restricted to older adults), and includes retention of one existing single family residence for a total of 604 new units and one existing unit. The project includes preservation or creation of 84.1+/- acres (30%) of open space including parks, trails, landscaped lots, and native open spaces. The project includes on-site and off-site infrastructure to serve the development. Construction of a clubhouse for the age-restricted units is also proposed. Build-out will likely occur over many years, but ultimately will be dictated by market demands.

1) Is this site within the current or historic range of the CRF (circle one)? YES NO

2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? YES NO

If yes, attach a list of all known CRF records with a map showing all locations.

## GENERAL AQUATIC HABITAT CHARACTERIZATION

*(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)*

**POND**:

Size: 3.8 acres (2.1 acre and 1.7 acres per pond section) Maximum depth: < 4m

Vegetation: Green Springs Creek and its associated ponds contained several inches of flowing water and supported thick growths of hardstem bulrush (Scirpus acutus), creeping spike rush (Eleocharis macrostachya), and narrow-leaf cattails (Typha angustifolia). Woody vegetation consisted of cottonwoods (Populus fremontii) and narrow-leaf willow (Salix exigua).

Substrate: sand, rock, and cobble

**Perennial or Ephemeral** *(circle one).* If ephemeral, date it goes dry:_____

Ponds

Appendix B

## California Red-legged Frog Habitat Site Assessment Data Sheet

**STREAM**:

Bank full width: N/A

Depth at bank full: N/A

Stream gradient: _____

Are there pools (circle one)? YES NO (dry at time of site visit)

If yes,

Size of stream pools: _____

Maximum depth of stream pools: _____

Characterize non-pool habitat: run, riffle, glide, other: _____

_____

_____

Vegetation: emergent, overhanging, dominant species: _____

_____

_____

Substrate: _____

_____

Bank description: _____

_____

_____

**Perennial or Ephemeral** *(circle one).* If ephemeral, date it goes dry: _____

| Other aquatic habitat characteristics, species observations, drawings, or comments: |
|---|
| |

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs (see Appendix A, photos 1-8)
3. Maps with important habitat features and species location (see Figure 2)

Ponds

Appendix B

## California Red-legged Frog Habitat Site Assessment Data Sheet

**Site Assessment reviewed by**_____ _____ _____
**(FWS Field Office) (date) (biologist)**

**Date of Site Assessment:** 04/22/2013
**(mm/dd/yyyy)**

**Site Assessment Biologists:** Hansen, Eric _____
**(Last name) (first name) (Last name) (first name)**

_____ _____
**(Last name) (first name) (Last name) (first name)**

**Site Location:** **El Dorado County, Dixon Ranch Project, UTM 670,016 E; 4,285,698 N (Zone 10 N)**
**(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).**

****ATTACH A MAP** (include habitat types, important features, and species locations)**

**Proposed project name:** Dixon Ranch Subdivision Project
**Brief description of proposed action:** The Dixon Ranch Project proposes to subdivide 280+/- acres into 444 single family detached residential units, 160 age-restricted single family detached units (age restricted to older adults), and includes retention of one existing single family residence for a total of 604 new units and one existing unit. The project includes preservation or creation of 84.1+/- acres (30%) of open space including parks, trails, landscaped lots, and native open spaces. The project includes on-site and off-site infrastructure to serve the development. Construction of a clubhouse for the age-restricted units is also proposed. Build-out will likely occur over many years, but ultimately will be dictated by market demands.

1) Is this site within the current or historic range of the CRF (circle one)? YES NO

2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? YES NO

If yes, attach a list of all known CRF records with a map showing all locations.

## GENERAL AQUATIC HABITAT CHARACTERIZATION

*(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)*

**POND**:

Size: N/A Maximum depth: N/A

Vegetation: _____

Substrate: _____

**Perennial or Ephemeral** *(circle one).* If ephemeral, date it goes dry: _____

Green Springs Creek

Appendix B

## California Red-legged Frog Habitat Site Assessment Data Sheet

**STREAM**:

Bank full width: ± 4 meters

Depth at bank full: < 0.5 meter

Stream gradient: <1%

Are there pools (circle one)? YES NO

If yes,

Size of stream pools: ± 100 meters$^2$

Maximum depth of stream pools: <0.5 meter

Characterize non-pool habitat: run, riffle, glide, other: _____

Vegetation: Green Springs Creek and its associated ponds contained several inches of flowing water and supported thick growths of hardstem bulrush (*Scirpus acutus*), creeping spike rush (*Eleocharis macrostachya*), and narrow-leaf cattails (*Typha angustifolia*). Woody vegetation consisted of cottonwoods (*Populus fremontii*) and narrow-leaf willow (*Salix exigua*).

Substrate: mixed soil and cobble

Bank description: mixed slope to undercut with open sand and gravel as well as well as woody and herbaceous vegetation

**Perennial or Ephemeral** *(circle one).* If ephemeral, date it goes dry: Unknown

| Other aquatic habitat characteristics, species observations, drawings, or comments: |
|---|
| |

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs (see Appendix A, photos 9-15)
3. Maps with important habitat features and species location (see Figure 2)

Green Springs Creek

Appendix B

## California Red-legged Frog Habitat Site Assessment Data Sheet

**Site Assessment reviewed by** _____ _____ _____
**(FWS Field Office)** **(date)** **(biologist)**

**Date of Site Assessment:** 04/22/2013
**(mm/dd/yyyy)**

**Site Assessment Biologists:** Hansen, Eric _____
**(Last name)** **(first name)** **(Last name)** **(first name)**

_____ _____
**(Last name)** **(first name)** **(Last name)** **(first name)**

**Site Location:** **El Dorado County, Dixon Ranch Project, UTM 670,016 E; 4,285,698 N (Zone 10 N)**
**(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).**

**ATTACH A MAP** (include habitat types, important features, and species locations)**

**Proposed project name:** Dixon Ranch Subdivision Project
**Brief description of proposed action:** The Dixon Ranch Project proposes to subdivide 280+/- acres into 444 single family detached residential units, 160 age-restricted single family detached units (age restricted to older adults), and includes retention of one existing single family residence for a total of 604 new units and one existing unit. The project includes preservation or creation of 84.1+/- acres (30%) of open space including parks, trails, landscaped lots, and native open spaces. The project includes on-site and off-site infrastructure to serve the development. Construction of a clubhouse for the age-restricted units is also proposed. Build-out will likely occur over many years, but ultimately will be dictated by market demands.

1) Is this site within the current or historic range of the CRF (circle one)? YES NO

2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? YES NO

If yes, attach a list of all known CRF records with a map showing all locations.

## GENERAL AQUATIC HABITAT CHARACTERIZATION

*(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)*

**POND**:

Size: _____ Maximum depth: _____

Vegetation: _____

Substrate: _____

**Perennial or Ephemeral** *(circle one).* If ephemeral, date it goes dry: _____

Seasonal Wetland Swales

Appendix B

## California Red-legged Frog Habitat Site Assessment Data Sheet

**STREAM**:

Bank full width: <2 meters

Depth at bank full: N/A

Stream gradient: <5%

Are there pools (circle one)? YES NO (dry at time of site visit)

If yes,

Size of stream pools: _____

Maximum depth of stream pools: _____

Characterize non-pool habitat: run, riffle, glide, other: _____

Vegetation: observed seasonal wetland swales represent vegetated linear sloping drainages that lack a defined bed and bank. Common species included Mediterranean barley (Hordeum marinum ssp. gussoneanum), curly dock (Rumex crispus), perennial rye grass (Lolium perenne), water cress (Rorippa nasturtium-aquaticum), tall flat sedge (Cyperus eragrostis), and spiny-fruited buttercup (Ranunculus muricatus).

Substrate: _____

Bank description: _____

**Perennial or Ephemeral** *(circle one).* If ephemeral, date it goes dry: Unknown

| Other aquatic habitat characteristics, species observations, drawings, or comments: |
|---|
| Dry at reaches viewed during this 22 April 2013 field visit. Described by Gibson & Skordal (2012) as ephemeral features. |

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs (see Appendix A, photos 16-18)
3. Maps with important habitat features and species location (see Figure 2)

Seasonal Wetland Swales

# Evaluation of Potential California Red-Legged Frog (*Rana aurora draytonii*) Habitat and Presence for the Dixon Ranch Subdivision Project, El Dorado County, California




Prepared by:

**Eric C. Hansen**
Consulting Environmental Biologist
4200 N. Freeway Boulevard, Suite 4
Sacramento, CA 95834


For:

**Dixon Ranch Venture, LLC**
1508 Eureka Road, Suite 235
Roseville, California 95661

**August 25, 2016**

# Evaluation of Potential California Red-Legged Frog (*Rana aurora draytonii*) Habitat and Presence for the Dixon Ranch Subdivision Project, El Dorado County, California

## INTRODUCTION

This report provides results of protocol-level species surveys conducted for the California red-legged frog (*Rana aurora draytonii*) on the Dixon Ranch Subdivision Project site (project site), located south of Green Valley Road in El Dorado County, California. A site visit was conducted for the purpose of assessing habitat suitability on 22 April 2013 and conditions were verified on June 5, 2015. A habitat assessment report was provided to the U.S Fish and Wildlife Service (Service) Forest Foothills Division on May 5, 2015[1]. Site conditions were validated on June 5, 2015. While formal guidance has not yet been provided, prior conversations with Mr. Chris Nagano suggest that presence of suitable habitat relative to regional species records likely warrant species-level surveys for sites in this region. As a proactive step to provide additional information while the Service reviewed the project, protocol species-level (breeding season) surveys were conducted in June of 2015. Although species-level surveys were not initiated in time to complete them in full by June 30, a report of interim findings was prepared on July 18, 2015[2] with the intention of providing results facilitating U.S Fish and Wildlife Service guidance on the project.

As stated in the May 5, 2015 habitat assessment report, the project site contains habitats suitable for California red-legged frogs, possessing both the aquatic and upland terrestrial habitats required by the species; however, the number of reported California red-legged frog occurrences in El Dorado County is low. The suitable habitats on the project site consist of two contiguous pond impoundments situated in the Green Springs

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[1] *Evaluation of Potential California Red-Legged Frog (Rana aurora draytonii) Habitat on the Dixon Ranch Subdivision Project*
*El Dorado County, California* . Prepared by Eric C. Hansen, Consulting Environmental Biologist, 4200 N. Freeway Boulevard, Suite 4, Sacramento, CA 95834. Prepared for Dixon Ranch Partners, LLC, 949 Tuscan Lane, Sacramento, California 95864. September 9, 2013.

2 *Evaluation of Potential California Red-Legged Frog (Rana aurora draytonii) Habitat and Presence for the Dixon Ranch Subdivision Project, El Dorado County, California*. Prepared by Eric C. Hansen, Consulting Environmental Biologist, 4200 N. Freeway Boulevard, Suite 4, Sacramento, CA 95834. Prepared for Dixon Ranch Venture. LLC, 12647 Alcosta Boulevard, Suite 470, San Ramon, CA 94583. July 18, 2015.

Creek corridor totaling approximately 3.8 acres in combined surface area, and the Green Springs Creek corridor. Locator, vicinity, and detail maps are included in Figures 1 and 2.

The methodologies used to complete assessments and surveys are presented below, and maps of regional species distribution are included as figures. Photographs of pertinent features and completed habitat assessment and species-level survey forms are included as Appendices A, B and C, respectively.

FIGURE 1. VICINITY MAP

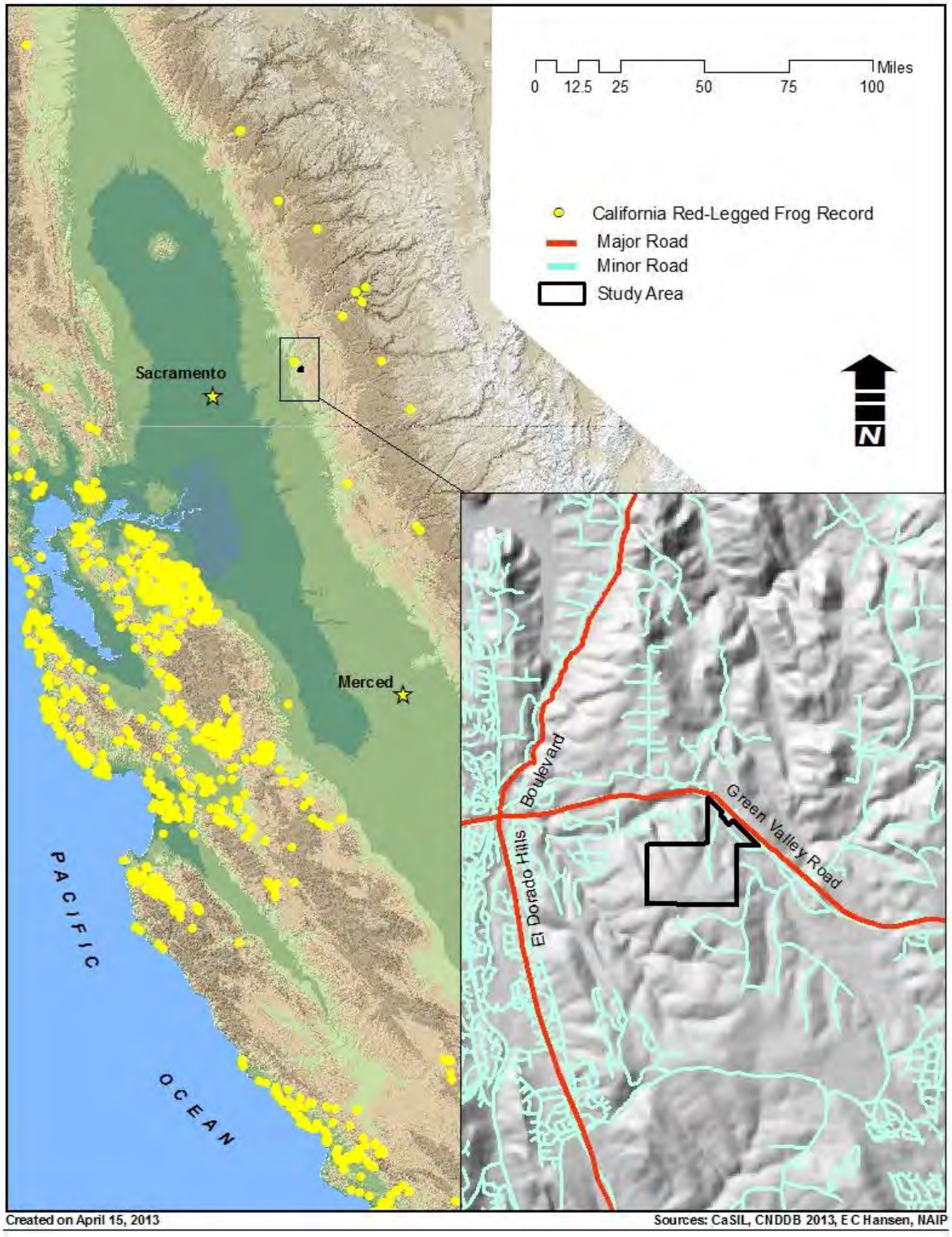
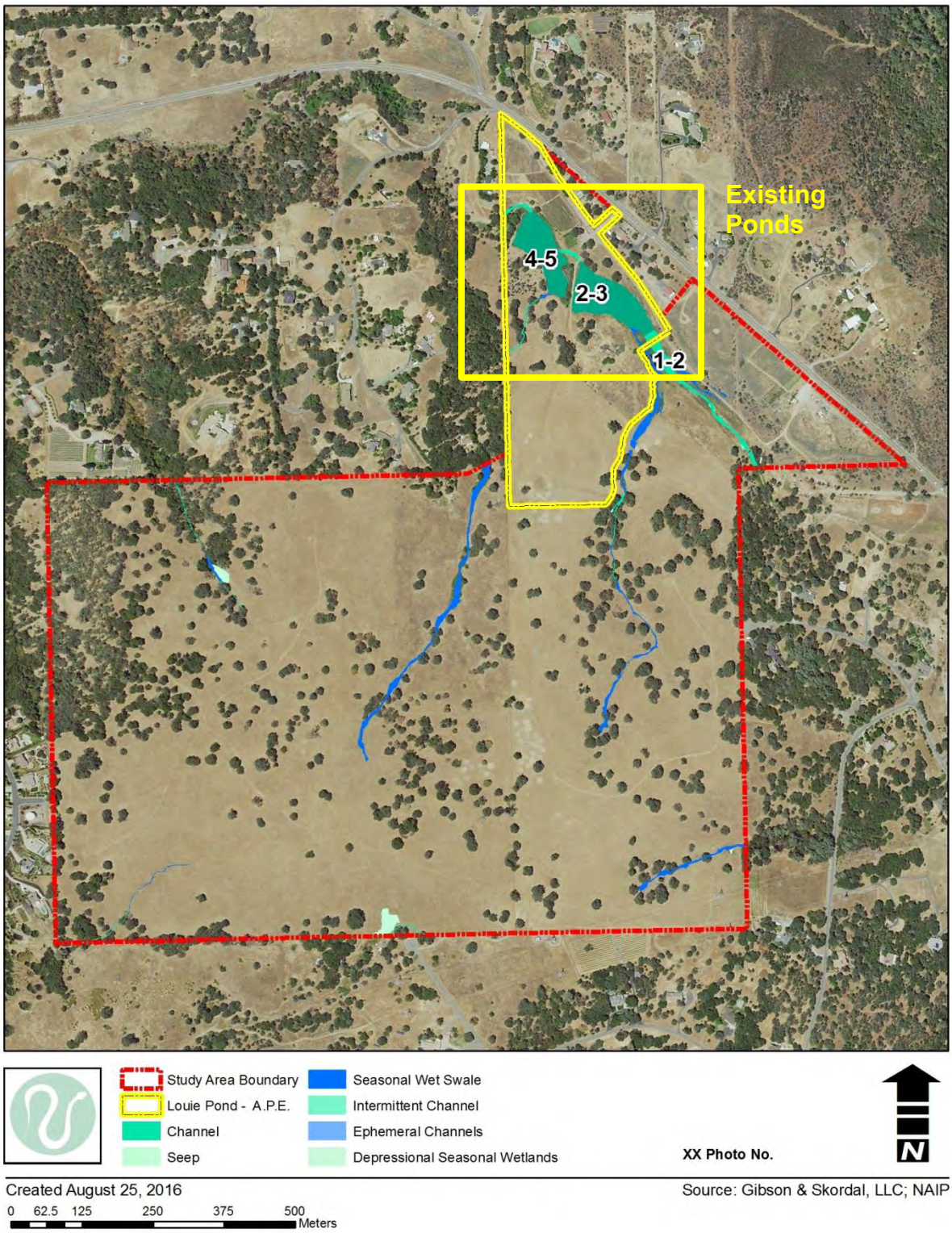


FIGURE 2. STUDY AREA DETAIL AND KEY TO PHOTOGRAPHS



## PROJECT AREA LOCATION, BACKGROUND, AND EXISTING CONDITIONS

Green Springs Creek runs through the project site generally east to west, and the existing ponds on the project site consist of two contiguous impoundments situated in the Green Springs Creek corridor totaling approximately 3.8 acres in combined surface area. The study area is located in Section 24, township 10 North, Range 8 East; Section 19, Township 10 North, Range 9 East, MDB&M, El Dorado County, California. The study area can be found at UTM 670,016 M E; 4,285,698 M N (Zone 10 North) and is portrayed on the Clarksville, California 7.5-Minute Series Topographic Quadrangle. In order to provide an adequate regional perspective, an approximately 301-acre study area established during prior wetland delineations and rare plant species assessments (Gibson & Skordal 2011, 2012) were used to complete the habitat assessment. To access the site from Sacramento, drive east on Highway 50 into El Dorado County and exit to the north onto El Dorado Hills Boulevard, travel north on El Dorado Hills Boulevard, and then turn right onto Green Valley Road. Continue east on Green Valley Road until reaching West Green Springs Drive. The study area is located southeast of the West Green Springs Drive-Green Valley Road intersection.

## PROPOSED ACTION

The Dixon Ranch project proposes to subdivide 280+/- acres into 444 single family detached residential units, 160 age-restricted single family detached units (age restricted to older adults), and includes retention of one existing single family residence for a total of 604 new units and one existing unit. The project includes preservation or creation of 84.1+/- acres (30%) of open space including parks, trails, landscaped lots, and native open spaces. The project includes on-site and off-site infrastructure to serve the development. Construction of a clubhouse for the age-restricted units is also proposed. Build-out will likely occur over many years, but ultimately will be dictated by market demands.

Required project approvals include: a General Plan Amendment (File No. A11-0006); Zone Change (File No. Z11-0008); Planned Development (File No. PD11-0006); Tentative Map (File No. TM11-1505); annexation into the El Dorado Irrigation District; annexation into the El Dorado Hills Community Service District; and annexation into the El Dorado Hills County Water District (El Dorado Hills Fire Department).

### *General Plan Amendment Description*

The project is currently located entirely within the General Plan Community Region (urban limit line) of El Dorado Hills and is designated as Low Density Residential (LDR) land use, with the exception of 1.5+/- acres at the southeast corner of the property that is designated as Open Space (OS) and associated with the existing SMUD power transmission corridor. LDR allows for a maximum density of 1 dwelling unit per 5 acres.

The proposed project is applying for a change in the land use designations on the site to High Density Residential (HDR) allowing for a density range of 1 to 5 units per acre; Medium Density Residential (MDR) allowing for a maximum of 1 dwelling unit per acre; and Open Space (OS). The proposed project is retaining the existing Low Density Residential (LDR) land use designation for the existing residence to remain.

***Planned Development Description***

The project is a planned development.

Proposed uses within the project are as follows:

1) 444 single family detached residential units with lot sizes ranging from 5,775 sf to 3.32 ac

| Product Type | Qty | Land Use |
|---|---|---|
| Village Small Lot | 149 | HDR |
| Village Large Lot | 173 | HDR |
| Hillside | 54 | HDR |
| Hillside Custom | 58 | HDR |
| Estate Residential | 5 | MDR |
| Estate Residential Large Lot | 5 | MDR |
| | 444 | |

2) 160 age-restricted single family detached residential units with lot sizes ranging from 4,725 sf to 12,685 sf

| Product Type | Qty | Land Use |
|---|---|---|
| Age-Restricted Small Lot | 80 | HDR |
| Age-Restricted Large Lot | 80 | HDR |
| | 160 | |

3) One existing Low Density Residential (LDR) unit to remain.
4) One Clubhouse lot (Lot C)
5) One EID lot for a proposed pump station
6) Public and private roadways
7) 84.1+/- acres or 30% total open space, including native open space, parks and landscape lots.
    a. Includes 11.14 acres of Parks including:
        - One Village Park (Lot A)
        - One Neighborhood Park (Lot B)

***Lighting***

Outdoor lighting in conformance with Section 17.14.170 of the County Ordinance Code is anticipated to be provided at major intersections, mid-block pedestrian crossings, along sag vertical curves where needed to establish adequate sight distance and as appropriate for public safety. Limited safety and security lighting and indirect shielded lighting will also be provided at park sites, gates and clubhouse including but not limited to parking areas, play areas, and walkways where appropriate. The project does not propose to use lighted ball fields or other light intensive uses at the proposed park sites.

**Existing Field Conditions**

The project site is situated in the foothills of the Sierra Nevada on rolling to relatively flat terrain at an average elevation of about 1,050 feet. The project site, which is primarily used as pasturage, is undeveloped and contains no habitable structures. Newer residential developments are located to the west while older ranchettes occupy lands to the north and east. The area in general is in the process of converting from rural to residential land use. The site was very lightly grazed by cattle and horses at the time of field surveys.

The majority of the site generally drains to the north/northeast into Green Spring Creek. Green Spring Creek, which traverses the northern portion of the study area from east to west, is tributary to Folsom Reservoir by way of New York Creek. The southwestern corner of the parcel appears to drain to the south towards Allegheny Creek which is located outside of the study area boundary. Allegheny Creek is also tributary to Folsom Reservoir by way of Green Spring Creek and New York Creek, respectively.

Based on records received from the State Water Resources Control Board, the ponds are believed to have been constructed around 1966. Both ponds are manmade and are separated by an earthen embankment with a small bridge/spillway. This embankment currently provides property access and is to be reconstructed in a manner that will continue to provide adequate property access, as appropriate, in conformance with applicable regulations.

Green Springs Creek originates approximately 1/3 of a mile upstream from the project site and generally flows in a northwesterly direction. The catchment area contributing to the lower of the two ponds is approximately 1800 acres. The storage amount is proposed to remain the same with current water rights allowing for storage of approximately 27 AC-FT combined between the two ponds. The normal pond water surface elevation (spillway crest elevation) for the lower pond is to remain at approximately elevation 972 feet (NAD83 datum). Though currently controlled by a vegetated / rock lined bypass, proposed improvements will consist of a spillway with appropriate erosion control and energy dissipation.

The upper pond water surface elevation is currently controlled by flash boards placed along the face of the existing bridge structure during summer months. At approximate top of flashboard elevations, the normal upper pond water surface elevation is set to approximately elevation 982 feet (NAD83 datum) during summer months. This elevation will become the new effective year-round permanent crest elevation for the upper pond as part of the proposed project

## FIELD SURVEY METHODS

Field surveys were conducted in June of 2015 according to U.S. Fish and Wildlife Service guidelines (April 4, 1997 Memorandum 1-1-97-TA-1093 Dissemination of Interim Guidance on Site Assessment and Field Surveys for California Red-Legged Frogs; August 2005 Revised Guidance on Site Assessment and Field Surveys for California Red-Legged Frogs). This Guidance recommends a total of up to eight (8) surveys to determine the presence of California Red-legged Frogs at or near a project site. Two (2) day surveys and four (4) night surveys are recommended during the breeding season; one (1) day and one (1) night survey is recommended during the non-breeding season. Each survey must take place at least seven (7) days apart. At least one survey must be conducted prior to August 15th. The survey period must be over a minimum period of 6 weeks (i.e., the time between the first and last survey must be at least 6 weeks). Throughout the species' range, the non-breeding season is defined as between July 1 and September 30.

This guidance requires that in assessing the presence of California red-legged frogs (CRF) at a given locale, the following steps and conditions are completed or met:

1. Upon arrival at the survey site, surveyors should listen for a few minutes for frogs calling, prior to disturbing the survey site by walking or looking for eye shine using bright lights. If CRF calls are identified, the surveyor should note this information on the survey data sheet and note the approximate location of the call. Once the survey begins, the surveyor should pay special attention to the area where the call originated in an attempt to visually identify the frog.

2. The most common method of surveying for CRF is the visual-encounter survey. This survey is conducted either during daylight hours or at night by walking entirely around the pond or marsh or along the entire length of a creek or stream while repeatedly scanning for frogs. This procedure allows one to scan each section of shore from at least two different angles. Surveyors should begin by first working along the entire shoreline, then by entering the water (if necessary and no egg masses would be crushed or disturbed), and visually scanning all shoreline areas and all aquatic habitats identified in the site assessment. Generally, surveyors shall focus on all open water to at least 2 meters (6.5 feet) up the bank. When wading, surveyors must take maximum care to avoid disturbing sediments, vegetation, or larvae. When walking on the bank, surveyors

shall take care to not crush rootballs, overhanging banks, and stream-side vegetation that might provide shelter for frogs. Surveys must cover the entire area, otherwise the remaining survey area must be surveyed the next day/night that weather conditions allow (both visits would constitute one day/night survey).

3. Day surveys may be conducted on the same day as a night survey. The main purpose of day surveys during the breeding season is to look for larvae, metamorphs, and egg masses; the main purpose of day surveys during the non-breeding season is to look for metamorphosing sub-adults, and non-breeding adults. Daytime surveys shall be conducted between one hour after sunrise and one hour before sunset.

4. The main purpose of night surveys is to identify and locate adult and metamorphosed frogs. Conditions and requirements for conducting night surveys are as follows:

    A. Night surveys must commence no earlier than one (1) hour after sunset.
    B. Due to diminished visibility, surveys should not be conducted during heavy rains, fog, or other conditions that impair the surveyor's ability to accurately locate and identify frogs.
    C. Nighttime surveys shall be conducted with a Service-approved light such as a Wheat Lamp, Nite Light, or sealed-beam light that produces less than 100,000 candle watt. Lights that the Service does not accept for surveys are lights that are either too dim or too bright. For example, Mag-Light-type lights and other types of flashlights that rely on 2 or 4 AA's/AAA's, 2 C's or 2 D batteries. Lights with 100,000 candle watt or greater are too bright and also would not meet Service requirements.
    D. The Service approved light must be held at the surveyor's eye level so that the frog's eye shine is visible to the surveyor.
    E. The use of binoculars is a must in order to effectively see the eye shine of the frogs. Surveys conducted without the use of binoculars may call in to question the validity of the survey.

5. Weather and visibility conditions must be consistent throughout the duration of the survey; if weather conditions become unsuitable, the survey must be completed at another time when conditions are better suited to positively locating and identifying frogs. Suitable conditions are as follows:

    A. Air temperature at the survey site must be at least 10 degrees Celsius (50 degrees Fahrenheit). Frogs are less likely to be active when temperatures are below 10 degrees Celsius (50 degrees Fahrenheit).
    B. Wind speed must not exceed 8 kilometers/hour (5 miles/hour) at the survey site. High wind speeds affect temperatures and the surveyor's ability to hear frogs calling.

C. Surveys must be conducted under clear to partly cloudy skies (high clouds are okay) but not under dense fog or during heavy rain, as stated above. Surveys may be conducted during light rains.

6. In an effort to minimize the spread of terrestrial and aquatic pathogens, all aquatic survey equipment including chest waders, wet suits, float tubes, kayaks, shall be decontaminated before entering potential CRF habitat using the guidelines in Appendix B. Careful attention shall be taken to remove all dirt from boots, chest waders, wetsuits, float tubes, kayaks, and other equipment before placing equipment into the water.

7. If the larval life stage is the only life stage detected and the larvae are not identified to species (or similarly, if sub-adult or adult frogs are observed but not identified to species), the surveyor must either return to the habitat to identify the frog in another life stage or obtain the appropriate permit (e.g., section 10(a)(1)(A) permit) authorization allowing the surveyor to handle CRF and larvae. In order for the Service to consider a survey to be complete, all frogs encountered must be accurately identified.

## RESULTS

In total, three (3) days and five (5) night surveys were completed between May 2 and July 13, 2016. Unlike the unsuitable drought conditions experienced during 2015, Green Springs Creek flowed continuously during the 2016 breeding season, enabling the completion of all surveys according to protocol. Sierran treefrog (*Pseudacris sierra*), American Bull Frog (*Lithobates catesbeianus*) and Western Toad (*Anaxyrus boreas*) were observed at all sites, but the upper (eastern) pond possessed a higher concentration of amphibian observations than the lower (western) pond. Only American bullfrogs were detected in the lower pond.

Green Springs Creek remained dry during the non-breeding season surveys (post-June 30). As with breeding-season surveys, there were more observations of Sierran treefrogs, American Bullfrogs, and Western toads at the upper pond compared to the lower pond. Large brambles of Himalayan Blackberry (*Rubus discolor*) made difficult to access both sides of the pond as well as large patches of hardstem bulrush (*Schoenoplectus acutus*) at both upper and lower ponds. During the non-breeding survey the bulrush on the lower site were grazed by cattle during the non-breeding survey period, potentially limiting habitat but increasing visibility during surveys.

As in previous years, no California red-legged frogs were detected at any time during the breeding- and non-breeding seasons. American bullfrogs were observed at all sites. Centrarchid fishes (*Lepomis* spp.) were only observed in the larger, lower pond. There were small minnow (unknown spp) observed in the smaller, upper pond. All of these

species may compete with and prey upon California red-legged frogs. Other potential predators included great blue herons (*Ardea herodias*), green-backed heron (*Butorides virescens*), pied-billed grebe (*Podilymbus podiceps*), North American raccoon (*Procyon lotor*), Valley garter snake (*Thamnophis sirtalis fitchi*) and Northern Pacific pond turtle (*Actinemys marmorata*). Larval Sierran treefrogs and Western toads were also observed, but neither are known to adversely affect California red-legged frogs
Full survey results are provided in Appendix B.

## SUMMARY

Permanent, suitable red-legged frog habitat is present on the project site within Green Springs Creek and the associated impoundments. Although drainage features on-site are characterized as ephemeral or intermittent, they also provide potential habitat for dispersing California red-legged frogs when they are flowing or when they possess pooled water following winter and spring rains. Although no California red-legged frogs were observed during the field surveys, there is ample supporting habitat on the project site.

The regional presence of California red-legged frogs remains unverified. A juvenile (unverified) California red-legged frog was reported in 2005 within 2.8 miles (4.5 km) of the Proposed Project from a drainage at the end of Fitch Way, on the east side of Folsom Lake, southwest of Iron Mountain and north of Highway 50 (CNDDB 2016), but no others are reported from the immediate vicinity. California red-legged frogs have been verified in recent years in El Dorado County in Weber Creek, near Placerville (early 1990s) (Miriam Green Associates 1996, CNDDB 2016), in Northeastern El Dorado County near Georgetown, and in Placer County near Michigan Bluff, but no verified populations are reported within 17.7 miles (28.5 km) of the project site. With the exception of the unverified juvenile frog reported near Folsom Lake, all California red-legged frogs recorded in this region of the Sierra Nevada occur above 2,000 feet, well above the approximately 1,050-foot mean elevation of the project site.

Predatory species such as American bullfrogs that may compete with or prey upon California red-legged frogs are present on the project site, further reducing the likelihood that California red-legged frogs persist in the area (Doubledee et al. 2003, Lawler et al. 1999, USFWS 2002). However, winter and spring flooding as well as periodic summer dry down within aquatic features may limit the density of these predators without limiting California red-legged frogs (Doubledee et al. 2003), and differing spatial distribution between red-legged frogs and potential predators may allow red-legged frogs to persist if present (Cook and Currylow 2014).

Though negative survey results do not provide definitive evidence of species absence, the lack of observations across multiple years of protocol-level surveys combined with the factors stated above suggests that California red-legged frogs probably do not occur here.

## REFERENCES

California Natural Diversity Database (CNDDB). Commercial Version, August 2016. Geographic Information Systems (GIS) data and computer printout of sensitive species records in California. California Department of Fish and Game, Natural Heritage Division, Sacramento, CA.

Cook, D.G. and A.F. Currylow. 2014. Seasonal Spatial Patterns of Two Sympatric Frogs: California Red-Legged Frog and American Bullfrog. Western Wildlife 1:1-7.

Doubledee, R. A., E. B. Muller, and R. M. Nisbet. 2003. Bullfrogs, disturbance regimes, and the persistence of California red-legged frogs. Journal of Wildlife Management 67, 424–438.

Lawler, S.P., D. Dritz, T. Strange, and M. Holyoak. 1999. Effects of introduced mosquitofish and bullfrogs on the threatened California red-legged frog. Conservation Biology 13(3):613:622.

Rathbun, G.B., M.R. Jennings, T.G. Murphey, and N.R. Siepel. 1993. Status and ecology of sensitive aquatic vertebrates in lower San Simeon and Pico Creeks, San Luis Obispo County, California. U.S. Fish and Wildlife Service, National Ecology Research Center, San Simeon, CA. Prepared for the California Department of Parks and Recreation. 103 pp.

# Appendix A: Photographs



Green Spring creek, breeding season



Green Springs Creek, non-breeding season



Upper Louie Pond, breeding season



Upper Louie Pond, non-breeding season



Lower Louie Pond (E end)



Lower Louie Pond (W end)

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

Survey results reviewed by _____ (FWS Field Office) _____ (date) _____ (biologist)

Date of Survey: 05/02/2018 (mm/dd/yyyy) Survey Biologist: Johnson (Last name) Adam (first name)

Survey Biologist: _____ (Last name) _____ (first name)

Site Location: 670105 / 4286498
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S).

**ATTACH A MAP (include habitat types, important features, and species locations)**

Proposed project name: Dixon Ranch / Louie pond
Brief description of proposed action:

Type of Survey (circle one): DAY (NIGHT) (BREEDING) NON-BREEDING

Survey number (circle one): (1) 2 3 4 5 6 7 8

Begin Time: 2108 End Time: 2211

Cloud cover: 0% Precipitation: 0%

Air Temperature: 17.3 Water Temperature: 21.1

Wind Speed: 0-1 mph Visibility Conditions: Excellent

Moon phase: Waning Crescent Humidity: 43%

Description of weather conditions: cool, calm, clear sky

Brand name and model of light used to conduct surveys: Nite lite

Were binoculars used for the surveys (circle one)? (YES) NO
Brand, model, and power of binoculars: Nikon, Action 8x40

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**AMPHIBIAN OBSERVATIONS**

| | Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification |
|---|---|---|---|---|---|---|
| seasonal creek | Sierran Chorus frog | >10 | H | Adults | lg | 100% |
| | Bullfrog | 1 | H | Adults | lg | 100% |
| ponds | Sierran Chorus frog | >10 | H | Adults | lg | 100 % |
| | Bull frogs | 3 | O | Adults | med/lg | 100% |
| | Sierran Chorus frog | 7 | O | Adult | lg | 100% |
| | Bull frog | | H | Adult | lg | 100% |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: Bull frog throughout property Mosquito fish and Contrachid in the shallows of coolers of the ponds.

Other notes, observations, comments, *etc.* I observed no Tadpoles in the ponds. I only observed Tadpoles in the seasonal creek. The Chorus & Bull frogs were calling in the ponds, but no eggs observed, maybe next visit I will see some Tadpoles.

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs
3. Maps with important habitat features and species locations

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

Survey results reviewed by _____
(FWS Field Office) (date) (biologist)

Date of Survey: 05/02/2016 (mm/dd/yyyy) Survey Biologist: Johnson (Last name) Adam (first name)

Survey Biologist: _____ (Last name) _____ (first name)

Site Location: 670105 / 4286498
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

**ATTACH A MAP (include habitat types, important features, and species locations)**

Proposed project name: Dixon Ranch / Louie pond
Brief description of proposed action:

Type of Survey (circle one): (DAY) NIGHT (BREEDING) NON-BREEDING

Survey number (circle one): (1) 2 3 4 5 6 7 8

Begin Time: 1743 End Time: 1856

Cloud cover: 10% Precipitation: 0%

Air Temperature: 25.5 Water Temperature: 24.1

Wind Speed: 0-1 mph Visibility Conditions: Excellent

Moon phase: Waning Crescent Humidity: 27%

Description of weather conditions: High thin clouds

Brand name and model of light used to conduct surveys: N/A

Were binoculars used for the surveys (circle one)? (YES) NO
Brand, model, and power of binoculars: Nikon, Action 8x40 B.2

# Appendix B: Field Survey Forms

Louie pond Day 1
5/2/14

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**AMPHIBIAN OBSERVATIONS**

| Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification |
|---|---|---|---|---|---|
| Bullfrog | 3 | H | Adult | Lg | 100% |
| Sierran Chorusfrog | >200 | O | larvae | sm-Med | 99% |
| Western Toad | >50 | O | larvae | sm | 99% |
| | | | | | |
| | | | | | |
| | | | | | |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: A pair of Pied-Billed Grebes, Bullfrog, Centrarchid (green sunfish), 9 mosquito fish, 2 Western Pond turtle, 1 in the seasonal creek, the 2nd was in the upper pond

Other notes, observations, comments, *etc.* All the larvae observed was in the seasonal creek were the water was slow with pools.
photo #11, looking @ pools in the seasonal creek.
photo #12 looking downstream, from end of property.
photo #13 looking @ upper pond
photo #14 " " lower pond
Tules are the dominant Vegetation @ both ponds
upper ~75% cover, lower ~90% cover

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs
3. Maps with important habitat features and species locations

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

Survey results reviewed by _____
(FWS Field Office) (date) (biologist)

Date of Survey: 05/18/2016 (mm/dd/yyyy) Survey Biologist: Johnson (Last name) Adam (first name)

Survey Biologist: _____ (Last name) _____ (first name)

Site Location: _____
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

**ATTACH A MAP (include habitat types, important features, and species locations)**

Proposed project name: Dixon Ranch, Lovie Ponds
Brief description of proposed action:

Type of Survey (circle one) (DAY) NIGHT (BREEDING) NON-BREEDING

Survey number (circle one): 1 (2) 3 4 5 6 7 8

Begin Time: 1727 End Time: 1850

Cloud cover: 0% Precipitation: 0%

Air Temperature: 33.2 Water Temperature: Upper pond 27.7, Lower pond 26.8, Seasonal Creek 29.4

Wind Speed: 2-5mph Visibility Conditions: Excellent

Moon phase: Waxing Gibbous Humidity: 27%

Description of weather conditions: Calm, Sunny with wind from the South West

Brand name and model of light used to conduct surveys: N/A

Were binoculars used for the surveys (circle one)? (YES) NO
Brand, model, and power of binoculars: Nikon 8x40 8.2°

Upper pond
2nd Day 5/10

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**AMPHIBIAN OBSERVATIONS**

| Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification |
|---|---|---|---|---|---|
| Bullfrog | 4 | H | Adult | med/lg | 100%. |
| Western Toad | 1 | O | Sub Adult | med | 100%. |
| Chorus frog | 28 | O | Sub Adult | med/lg | 100%. |
| Chorus frog | +100 | O | larvae | sm - lg | 100%. |
| Chorus frog | +30 | O | Metamorphosis | lg | 100%. |
| | | | | | |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: Bullfrog, Western Pond turtle, Great Blue Heron, Pied-Billed Grebe, Belted Kingfisher, Sunfish sp. and Garter snake sp.

Other notes, observations, comments, *etc.* upper pond and seasonal creek has the highest numbers of chorus frog in all life stages as well as western toad. Both pond have Bullfrogs and fish, but the lower pond has larger predatory fish

The water in seasonal creek has dropped about 2 inches. Both ponds water level is stable.

Photo #28 showing $H_2O$ levels of seasonal creek.

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs
3. Maps with important habitat features and species locations

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

Survey results reviewed by _____ (FWS Field Office) _____ (date) _____ (biologist)

Date of Survey: 05/18/2016 (mm/dd/yyyy) Survey Biologist: Johnson (Last name) Adam (first name)

Survey Biologist: _____ (Last name) _____ (first name)

Site Location: _____
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

**ATTACH A MAP (include habitat types, important features, and species locations)**

Proposed project name: Dixon Ranch, Louie Pond
Brief description of proposed action:

Type of Survey (circle one): DAY (NIGHT) (BREEDING) NON-BREEDING

Survey number (circle one): 1 (2) 3 4 5 6 7 8

Begin Time: 2124 End Time: 2240

Cloud cover: 10% Precipitation: 0%

Air Temperature: 116.8 Water Temperature: upper pond 23.9 lower pond 23.1 Seaman Creek 21.1

Wind Speed: 2mph Visibility Conditions: Excellent

Moon phase: Waxing Gibbous Humidity: 40%

Description of weather conditions: Clear, calm, wind from southwest

Brand name and model of light used to conduct surveys: Nitelite

Were binoculars used for the surveys (circle one)? (YES) NO
Brand, model, and power of binoculars: Nikon 8x40

Lovie Ponds
Nile 5/19

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**AMPHIBIAN OBSERVATIONS**

| Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification |
|---|---|---|---|---|---|
| Bull frog | 6 | H | Adult | Lg | 100% |
| Chorus frog | 14 | H | Adult | Lg | 100% |
| Chorus frog | 8 | O | Sub Adult | med-lg | 100% |
| Chorus frog | 4200 | O | Larvae | sm-lg | 100% |
| | | | | | |
| | | | | | |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: Bullfrog and sunfish in lower pond.

Other notes, observations, comments, *etc.* Bull frogs are located in the upper and lower ponds, but the chorus frogs are located at the upper pond and seasonal creek only. No Tadpoles observed in the lower pond. Minnows observed in the upper pond, where as the lower pond has sunfish & mosquito fish

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs
3. Maps with important habitat features and species locations

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

Survey results reviewed by _____ (FWS Field Office) _____ (date) _____ (biologist)

Date of Survey: 06/07/2016 (mm/dd/yyyy) Survey Biologist: Johnson (Last name) Adam (first name)

Survey Biologist: _____ (Last name) _____ (first name)

Site Location: _____
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

**ATTACH A MAP (include habitat types, important features, and species locations)**

Proposed project name: Louie Ponds
Brief description of proposed action:

Type of Survey (circle one): DAY (NIGHT) (BREEDING) NON-BREEDING

Survey number (circle one): 1 2 (3) 4 5 6 7 8

Begin Time: 2131 End Time: 2248

Cloud cover: 0% Precipitation: 0%

Air Temperature: 19.0 °C Water Temperature: upper 24.6 Lower 25.5

Wind Speed: 0-2mph Visibility Conditions: Excellent

Moon phase: Waxing Crescent Humidity: 43%

Description of weather conditions: Clear sky, calm with a wind from the SSW

Brand name and model of light used to conduct surveys: Nite lite

Were binoculars used for the surveys (circle one)? (YES) NO
Brand, model, and power of binoculars: Nikon 8x40

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**AMPHIBIAN OBSERVATIONS**

| Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification |
|---|---|---|---|---|---|
| Bullfrog | 4 | H | Adult | med-lg | 100% |
| Bullfrog | 6 | O | Adult | sm-lg | 100% |
| Chorus frog | 3 | H | Adult | lg | 100% |
| Chorus frog | >100 | O | sub Adult | sm-med | 100% |
| Chorus frog | 19 | O | Larvae | med-lg | 100% |
| Western Toad | 23 | O | subAdult | sm-med | 100% |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: Bull frog, Centrarchid

Other notes, observations, comments, *etc.* Water is down from last ~~vit~~ visit. The creek has no flow, only small pools remain Chorus frogs (Larvae & subAdult) were observed, with 2 sub Adult Bull frog. The water at the upper pond has dropped no flow between upper & lower ponds. Around the upper site subAdult Chorus ~~frog~~ in number hard to count so many. I only heard 1 Adult Bull frog at ~~the~~ the lower site. Fishing bait cans are at the lower site, may be Bass in that pond. All other frog observations were at the upper pond.

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs
3. Maps with important habitat features and species locations

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

Survey results reviewed by _____ (FWS Field Office) _____ (date) _____ (biologist)

Date of Survey: 6/29/2016 (mm/dd/yyyy)

Survey Biologist: Johnson (Last name) Adam (first name)

Survey Biologist: _____ (Last name) _____ (first name)

Site Location: _____
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

**ATTACH A MAP (include habitat types, important features, and species locations)**

Proposed project name: Lovie Ponds
Brief description of proposed action:

Type of Survey (circle one): DAY (NIGHT)

BREEDING NON-BREEDING

Survey number (circle one): 1 2 3 (4) 5 6 7 8

Begin Time: 2141 End Time: 2236

Cloud cover: 0% Precipitation: 0%

Air Temperature: 22.2 Water Temperature: _____

Wind Speed: 0-1 mph Visibility Conditions: Excellent

Moon phase: Waning Crescent Humidity: 35%

Description of weather conditions: clear & calm

Brand name and model of light used to conduct surveys: Nite Lite

Were binoculars used for the surveys (circle one)? (YES) NO

Brand, model, and power of binoculars: Nikon 8X40

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**AMPHIBIAN OBSERVATIONS**

| Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification |
|---|---|---|---|---|---|
| Bull frog | ~~#3~~ | H | Adult | Lg | 100% |
| Western Toad | 8 | O | subAdult | med-lg | 100% |
| Sierran Chorus frog | 29 | O | subAdult | med-lg | 100% |
| Bull frog | 11 | O | Adult | med-lg | 100% |
| | | | | | |
| | | | | | |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: Centrarchid in the lower pond.

Other notes, observations, comments, *etc.* Seasonal creek is dry, no pools remain. Water is down ~6" at both pond. The tules & cattails along the shore have been grazed. It makes it easy to see more of the pond. All frogs observed and Heard were located at the upper pond. I did observed a WPT (western pond turtle) at the lower pond.

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs
3. Maps with important habitat features and species locations

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

Survey results reviewed by _____ (FWS Field Office) _____ (date) _____ (biologist)

**Date of Survey:** 07/13/2016 (mm/dd/yyyy) **Survey Biologist:** Johnson (Last name) Adam (first name)

**Survey Biologist:** _____ (Last name) _____ (first name)

**Site Location:** _____
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: Levee Ponds
Brief description of proposed action:

**Type of Survey** (circle one): DAY / NIGHT **BREEDING** / (NON-BREEDING)

**Survey number** (circle one): (1) 2 3 4 5 6 7 8

**Begin Time:** 1835 **End Time:** 1942

**Cloud cover:** 0% **Precipitation:** 0%

**Air Temperature:** 29.9°C **Water Temperature:** upper 29.9°C lower 28.4°C

**Wind Speed:** 1-3mph **Visibility Conditions:** Excellent

**Moon phase:** Waxing Gibbous **Humidity:** 26%

**Description of weather conditions:** Sunny, wind from west

**Brand name and model of light used to conduct surveys:** N/A

**Were binoculars used for the surveys** (circle one)? (YES) NO
**Brand, model, and power of binoculars:** Nikon 8x40

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**AMPHIBIAN OBSERVATIONS**

| Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification |
|---|---|---|---|---|---|
| Sierran Chorus frog | 57 | O | Adult | sm-med | 100% |
| Weston Toad | 9 | O | Adult | Sm | 100% |
| Bull frog | ~~1~~ | H | Adult | lg | 100% |
| | | | | | |
| | | | | | |
| | | | | | |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: Bull frog, Gartes Snake (T. sirtalis), Centrarchid, Western pond turtle, Great Egert and Greenback heron.

Other notes, observations, comments, *etc.* Seasonal creek dry, and no flow between ponds, Most of the frog were obsered in or around the upper pond. Did observed for the first time Chorus frogs around the lower pond. In the lower pond, 5 Western Pond turtles observed. Top water feeding by Centrarchid fish was observed as well.

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs
3. Maps with important habitat features and species locations

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

Survey results reviewed by _____
(FWS Field Office) (date) (biologist)

Date of Survey: 07/13/2016 (mm/dd/yyyy) Survey Biologist: Johnson (Last name) Adam (first name)

Survey Biologist: _____ (Last name) _____ (first name)

Site Location: _____
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

**ATTACH A MAP (include habitat types, important features, and species locations)**

Proposed project name: Louie Ponds
Brief description of proposed action:

Type of Survey (circle one): DAY (NIGHT) BREEDING (NON-BREEDING)

Survey number (circle one): (1) 2 3 4 5 6 7 8

Begin Time: 2141 End Time: 2252

Cloud cover: 0% Precipitation: 0%

upper = 24.4°C

Air Temperature: 26.3 Water Temperature: lower = 25.9°C

Wind Speed: 0-1 mph Visibility Conditions: Excellent

Moon phase: Waxing Gibbous Humidity: 25%

Description of weather conditions: Clear, calm

Brand name and model of light used to conduct surveys: Night Ide

Were binoculars used for the surveys (circle one)? (YES) NO
Brand, model, and power of binoculars: Nikon 8 x 40

# Appendix B: Field Survey Forms

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**AMPHIBIAN OBSERVATIONS**

| Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification |
|---|---|---|---|---|---|
| Bull frog | 4 | H | Adult | Lg | 100% |
| Bull frog | 12 | O | Adult | sm-lg | 100% |
| Chorus frog | 34 | O | Adult | sm-md | 100% |
| Western Toad | 1 | O | Adult | sm | 100% |
| Bull frog | 9 | O | Larvae | Lg | 100% |
| | | | | | |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: Bullfrog, centrarchid (Blue-gill)

Other notes, observations, comments, *etc.* The lower pond is where I observed the Bull frog tadpoles, and 2 of 12 Bull frog Adult.
By the end of summer the upper pond maybe dry where as the lower pond is deeper and will hold it's water longer.

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs
3. Maps with important habitat features and species locations

# Appendix C: Surveyor Qualifications

## ADAM L. JOHNSON, STAFF BIOLOGIST

**Eric C. Hansen, Consulting Environmental Biologist**

**2001-Present**

### Education

**B.S. in Wildlife Management,** Humboldt State University, Arcata, CA 2003
Concentrations: Wildlife Management with minor in Environmental Resources

### Licenses/Registration

Included on List of Authorized Individuals on Eric C. Hansen's

US FISH AND WILDLIFE SERVICE RECOVERY PERMIT: ESA10(a)(1)(A) - TE-018177-6

DEPARTMENT OF FISH AND GAME SCIENTIFIC COLLECTING PERMIT - 006309

### Professional Summary

Adam Johnson is a senior staff biologist for Eric C. Hansen, Consulting Environmental Biologist. In this capacity, Mr. Johnson has conducted biological monitoring and field research, including visual encounter, trapping, and radio telemetry surveys, for the state- and federally-listed (Threatened) giant garter snake, and has conducted sampling for an abundance of wildlife species throughout California's Central Valley. Mr. Johnson has also conducted biological compliance monitoring on a multitude of projects, including pre-construction and on-site monitoring and administering environmental awareness training to construction personnel.

### Professional Training

**California Tiger Salamander Workshop--Special Emphasis on Sampling/Surveying Upland Habitats, Carmel Valley, CA, June, 2010** - Sponsored by the Elkhorn Slough Coastal Training Program, administered by Dr. Pete Trenham

**California Red-Legged Frog Workshop, April 2010** - Sponsored by the Elkhorn Slough Coastal Training Program, administered by Galen Rathbun and Norman Scott

**California Tiger Salamander Workshop, Watsonville, CA, March, 2010** - Sponsored by the Elkhorn Slough Coastal Training Program, Administered by Dr. Pete Trenham

**Rare Pond Species Survey Techniques Workshop, Rohnert Park, CA, March, 2008** - Sponsored by the Leguna de Santa Rosa Foundation and The Wildlife Project, administered by Dr. Jeff Alvarez and Dr. David Cook

**California Tiger Salamander Workshop--Special Emphasis on Sampling/Surveying Upland Habitats, Carmel Valley, CA, June, 2010** - Sponsored by the Elkhorn Slough Coastal Training Program, administered by Dr. Pete Trenham

### Sample Experience:

**Kinder Morgan Energy Partners – Pipeline Anomaly Inspection and Repair Projects, Contra Costa, Sacramento, San Joaquin, and Yolo Counties, CA.** Conducted biological monitoring on multiple underground pipeline inspection/repair projects throughout the Central Valley of California. Conducted pre-construction surveys and on-site monitoring for giant garter snake, Swainson's Hawk, Burrowing Owl, and western pond turtle. 2006 - Present.

**Biological Effectiveness Monitoring for the Natomas Basin Habitat Conservation Plan Area.** Served as staff biologist for giant garter snake population surveys (trapping and visual encounter) conducted in the Natomas Basin. Conducted field surveys independently and assisted in the supervision/coordination of seasonal field research technicians. 2004 - 2010.

# Evaluation of Potential California Tiger Salamander (*Ambystoma californiense*) Habitat on the Dixon Ranch Subdivision Project El Dorado County, California




Prepared by:

**Eric C. Hansen**
Consulting Environmental Biologist
4200 N. Freeway Boulevard, Suite 4
Sacramento, CA 95834


For:

**Dixon Ranch Partners, LLC**
949 Tuscan Lane
Sacramento, California 95864

September 9, 2013

# Evaluation of Potential California Tiger Salamander (*Ambystoma californiense*) Habitat on the Dixon Ranch Subdivision Project, El Dorado County, California

## INTRODUCTION

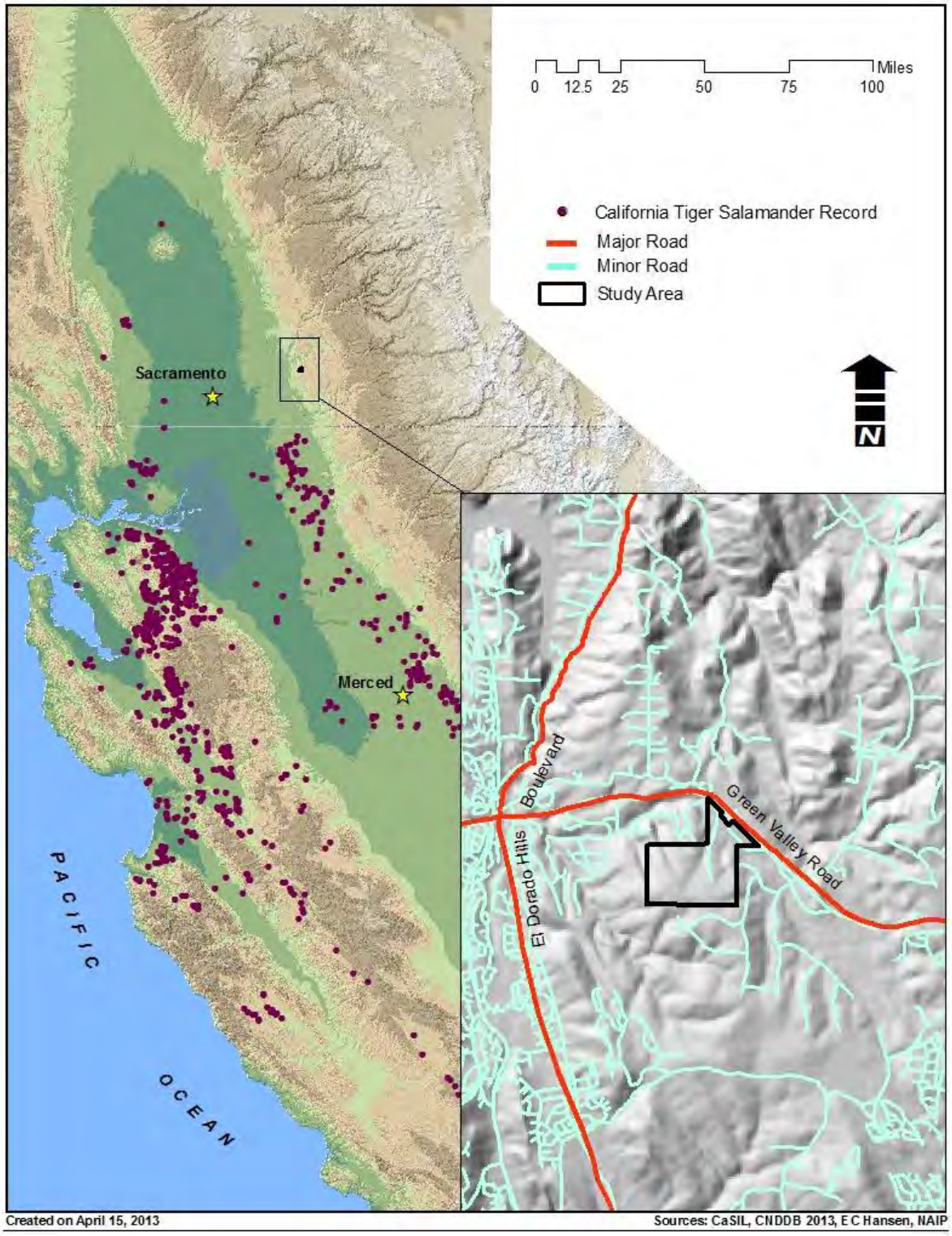
This report provides the results of California tiger salamander (*Ambystoma californiense*) habitat suitability assessments on the Dixon Ranch Subdivision project site, located south of Green Valley Road in El Dorado County, California. A site visit was conducted for this purpose on 22 April 2013. The Louie Ponds consist of two contiguous impoundments situated in the Green Springs Creek corridor totaling approximately 3.8 acres in combined surface area. In order to provide an adequate regional perspective, an approximately 301-acre study area established during prior wetland delineations and rare plant species assessments (Gibson & Skordal 2011, 2012) were used to complete the assessment. The study area is located in Section 24, township 10 North, Range 8 East; Section 19, Township 10 North, Range 9 East, MDB&M, El Dorado County, California. The study area ranges from approximately 950-feet to 1240 feet in elevation, can be found at UTM 670,016 M E; 4,285,698 M N (Zone 10 North), and is portrayed on the Clarksville, California 7.5-Minute Series Topographic Quadrangle. Locator, vicinity, and detail maps are included in Figure 1 and Figure 2.

To access the site from Sacramento, drive east on Highway 50 into El Dorado County and exit to the north onto El Dorado Hills Boulevard, travel north on El Dorado Hills Boulevard, and then turn right onto Green Valley Road. Continue east on Green Valley Road until reaching West Green Springs Drive. The study area is located south of the West Green Springs Drive-Green Valley Road intersection. Existing or approved adjacent subdivisions include Green Springs Ranch to the east and southeast, Serrano to the southwest, and Highland View to the west.

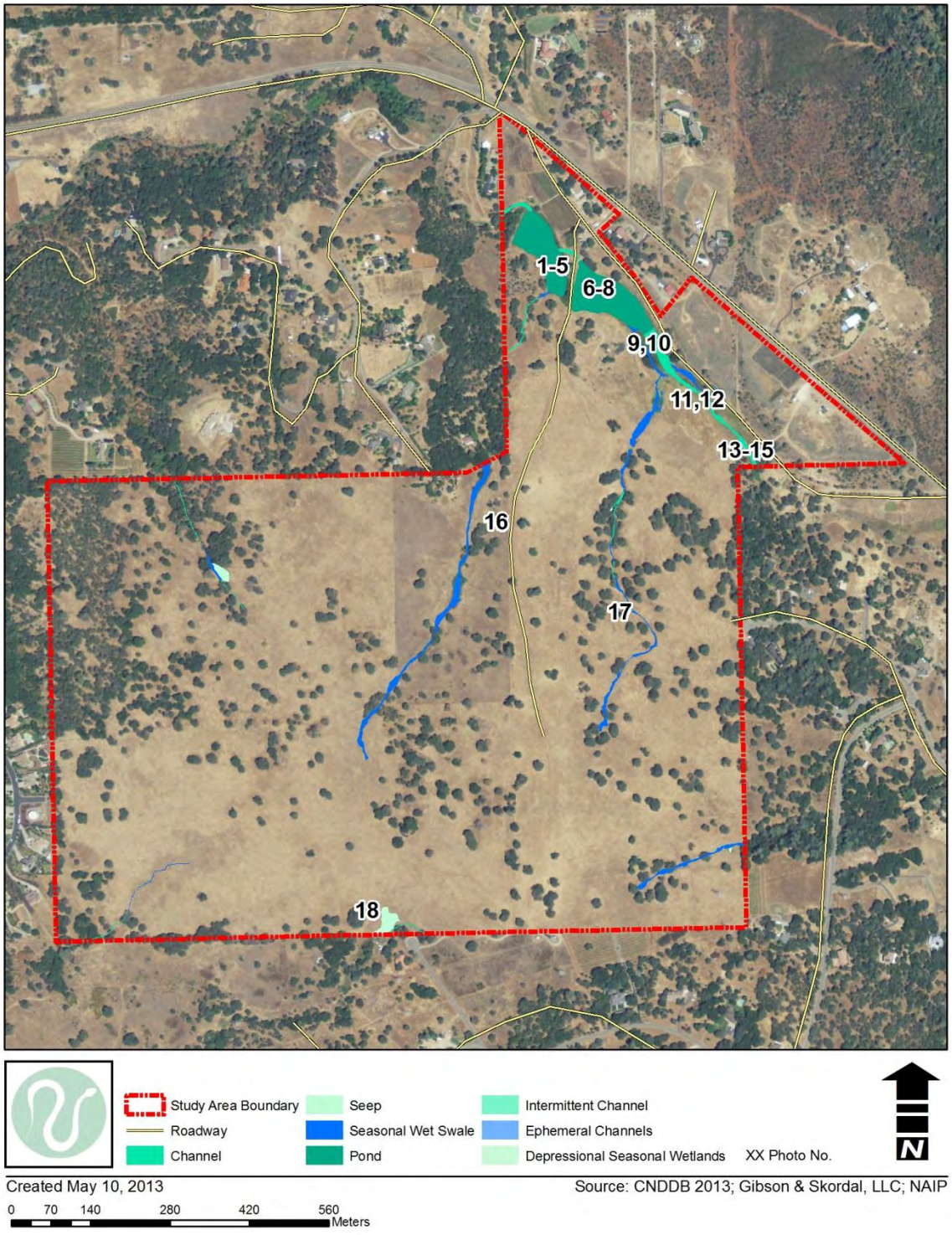
The area surrounding the project site contains habitats suitable for California tiger salamanders, possessing both the aquatic and upland terrestrial habitats required by the species. However, the project site lies approximately 19 miles north of the northernmost records situated along the Sierra Nevada foothills and at higher elevation than the preponderance of known records along this portion of the Sierra Nevada foothills. Despite the presence of suitable habitat, the presence of predatory species and distance from known populations within this portion of the species' range suggests that California tiger salamanders are unlikely to occur on the project site.

The methodologies used to complete this assessment are presented below, and maps of regional species distribution are included as figures. Photographs of pertinent features are included as Appendix A.

## FIGURE 1. VICINITY MAP



## FIGURE 2. STUDY AREA DETAIL AND KEY TO PHOTOGRAPHS



## HABITAT ASSESSMENT

### Legal Status

The Santa Barbara County population of the California tiger salamander (*Ambystoma californiense*) was federally listed as endangered on September 21, 2000 (65 **FR** 57242). The Sonoma County Distinct Population Segment (DPS) of the California tiger salamander was listed as endangered on July 22, 2002 (67 **FR** 47727). The Central California DPS of the California tiger salamander was proposed for listing as threatened on May 23, 2003 (68 **FR** 28648). The Santa Barbara and Sonoma County DPSs were proposed for reclassification from endangered to threatened, on May 23, 2003 (68 **FR** 28648). The California Department of Fish and Wildlife (Department) considers the California tiger salamander throughout its entire range to be a species of special concern (Special Animals List July 2003 http://www.dfg.ca.gov/whdab/html/lists.html).

### Life History

The California tiger salamander is restricted to grasslands, oak savannah, and coastal scrub communities of lowlands and foothill regions where aquatic sites are available for breeding. California tiger salamanders are typically found at elevations below 460 m (1,509 feet) (USFWS 2004a), although the known elevational range extends up to 1,053 m (3,458 feet) (Jennings and Hayes 1994). The species utilizes natural ephemeral pools or artificial ponds that mimic them (e.g., stock ponds that are allowed to dry).

Larvae require a minimum of approximately 10 weeks to complete metamorphic transformation (P. Anderson 1968, Feaver 1971), significantly longer than other amphibians such as the Sierra tree frog (*Pseudachris sierra*) and western spadefoot (*Spea hammondii*). The duration of the larval period restricts California tiger salamander breeding to large vernal pools, vernal playas, and large sag ponds. Compared to the western toad (*Bufo boreas*) or western spadefoot, California tiger salamanders are poor burrowers and require subterranean refuges constructed by ground squirrels and other burrowing mammals (Jennings and Hayes 1994). Salamanders spend the dry season, which comprises most of a year, within these burrows (USFWS 2004b). Although California tiger salamanders are often considered to be in a state of dormancy, called aestivation, during the period in which in they occupy these burrows, evidence suggests that salamanders may remain active while within their burrows (S. Sweet in litt. in USFWS 2004b).

## Proposed Action

### *Project Description*

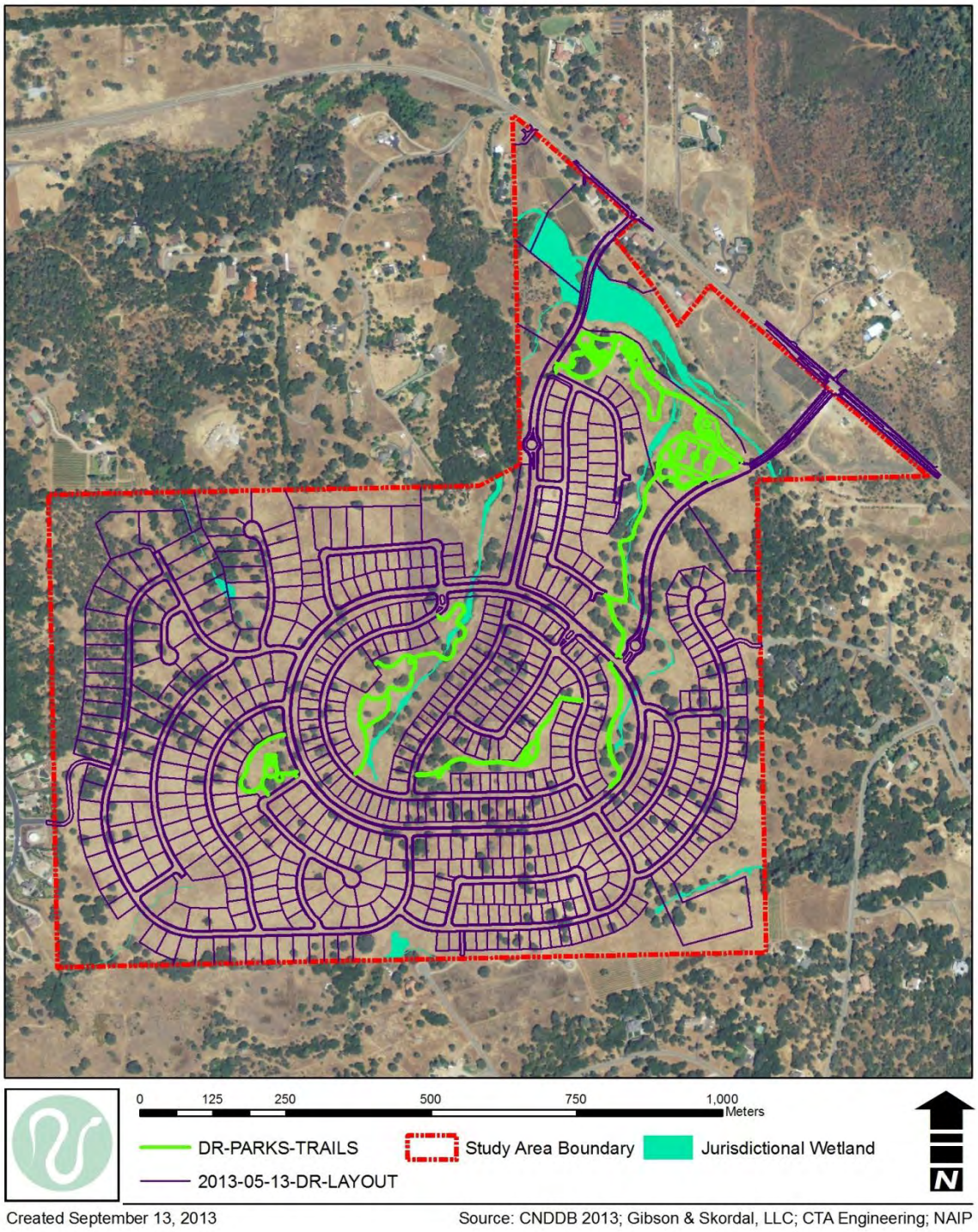
The Dixon Ranch Project proposes to subdivide 280+/- acres into 444 single family detached residential units, 160 age-restricted single family detached units (age restricted to older adults), and includes retention of one existing single family residence for a total of 604 new units and one existing unit. The project includes preservation or creation of 84.1+/- acres (30%) of open space including parks, trails, landscaped lots, and native open spaces. The project includes on-site and off-site infrastructure to serve the development. Construction of a clubhouse for the age-restricted units is also proposed. Build-out will likely occur over many years, but ultimately will be dictated by market demands. The proposed development plan is shown in Figure 3.

Required project approvals include: a General Plan Amendment (File No. A11-0006); Zone Change (File No. Z11-0008); Planned Development (File No. PD11-0006); Tentative Map (File No. TM11-1505); annexation into the El Dorado Irrigation District; annexation into the El Dorado Hills Community Service District; and annexation into the El Dorado Hills County Water District (El Dorado Hills Fire Department).

### *General Plan Amendment Description*

The project is currently located entirely within the General Plan Community Region (urban limit line) of El Dorado Hills and is designated as Low Density Residential (LDR) land use, with the exception of 1.5+/- acres at the southeast corner of the property that is designated as Open Space (OS) and associated with the existing SMUD power transmission corridor. LDR allows for a maximum density of 1 dwelling unit per 5 acres. The proposed project is applying for a change in the land use designations on the site to High Density Residential (HDR) allowing for a density range of 1 to 5 units per acre; Medium Density Residential (MDR) allowing for a maximum of 1 dwelling unit per acre; and Open Space (OS). The proposed project is retaining the existing Low Density Residential (LDR) land use designation for the existing residence to remain.

## FIGURE 3. PROPOSED DEVELOPMENT PLAN




Created September 13, 2013

Source: CNDDB 2013; Gibson & Skordal, LLC; CTA Engineering; NAIP

***Planned Development Description***

The project is a planned development.

Proposed uses within the project are as follows:

1) 444 single family detached residential units with lot sizes ranging from 5,775 sf to 3.32 ac

| Product Type | Qty | Land Use |
|---|---|---|
| Village Small Lot | 149 | HDR |
| Village Large Lot | 173 | HDR |
| Hillside | 54 | HDR |
| Hillside Custom | 58 | HDR |
| Estate Residential | 5 | MDR |
| Estate Residential Large Lot | 5 | MDR |
| | 444 | |

2) 160 age-restricted single family detached residential units with lot sizes ranging from 4,725 sf to 12,685 sf

| Product Type | Qty | Land Use |
|---|---|---|
| Age-Restricted Small Lot | 80 | HDR |
| Age-Restricted Large Lot | 80 | HDR |
| | 160 | |

3) One existing Low Density Residential (LDR) unit to remain.
4) One Clubhouse lot (Lot C)
5) One EID lot for a proposed pump station
6) Public and private roadways
7) 84.1+/- acres or 30% total open space, including native open space, parks and landscape lots.
    a. Includes 11.14 acres of Parks including:
        - One Village Park (Lot A)
        - One Neighborhood Park (Lot B)

***Lighting***

Outdoor lighting in conformance with Section 17.14.170 of the County Ordinance Code is anticipated to be provided at major intersections, mid-block pedestrian crossings, along sag vertical curves where needed to establish adequate sight distance and as appropriate for public safety. Limited safety and security lighting and indirect shielded lighting will also be provided at park sites, gates and clubhouse including but not limited to parking areas, play areas, and walkways where appropriate. The project does not propose to use lighted ball fields or other light intensive uses at the proposed park sites.

## Existing Field Conditions

The project site is situated in the foothills of the Sierra Nevada on rolling to relatively flat terrain at an average elevation of about 1,050 feet The project site is primarily used as pasturage and currentlycontains two habitable structures. Newer residential developments are located to the west while ranchettes occupy lands to the north and east. The site was very lightly grazed by cattle and horses at the time of field surveys.

The majority of the site generally drains to the north/northeast into Green Springs Creek. Green Springs Creek, which traverses the northern portion of the study area from east to west, is tributary to Folsom Reservoir by way of New York Creek. The southwestern corner of the parcel appears to drain to the south towards Allegheny Creek which is located outside of the study area boundary. Allegheny Creek is also tributary to Folsom Reservoir by way of Green Springs Creek and New York Creek, respectively.

## Methods

A field assessment was conducted on 22 April, 2013 according to regulatory guidelines (October 2003 Interim Guidance on Site Assessment and Field Surveys for Determining Presence or Negative Findings for the California Tiger Salamander; prepared jointly by the U.S. Fish and Wildlife Service and California Department of Fish and Game). These guidelines require that in assessing the likelihood that California tiger salamanders may occur at a given locale, information satisfying the following elements should be compiled and submitted to USFWS for further evaluation and guidance:

Element 1. Is the project within the current or historic range of the California tiger salamander?

Element 2. What are the known localities of California tiger salamander within the project site and within 3.1 miles (5 kilometers) (km) of the project boundaries? This is to place the project in a regional perspective.

Element 3. What are the habitats within the project site and within 1.24 miles (2 kilometers) of the project boundaries? This distance is based on the observed mobility of the species.

To satisfy these elements, first, California tiger salamander locality records were obtained by conducting a computer search of the most recent version of the CNDDB (2013). Next, to place the project in regional perspective, potential records falling within 1.24- and 3.1-mile (2 and 5-kilometer) radii of the project site were examined using the Geographic Information Systems (GIS) program ArcMap 9.2. GIS-generated maps are used to illustrate California tiger salamander distribution relative to the project site (Figure 1, Figure 2). Finally, habitats within and surrounding the project site were identified using a combination of site plans, field surveys, and GIS analysis using digitized USGS 7.5-minute topographic maps and digital orthographic quarter quadrangle (DOQQ) maps (digitized aerial maps) from the California Spatial Information Library (http://gis.ca.gov/) and the National Agriculture Imagery Program (http://www.fsa.usda.gov/FSA/apfoapp?area=home&subject=prog&topic=nai).

Protocol level field surveys for California tiger salamanders were not conducted as part of this assessment.

## Results

**Element 1 —** The project site is not within the documented range of the California tiger salamander, nor does it fall within critical habitat designated for the species. The range of the California tiger salamander with respect to the project site is illustrated in Figure 1.

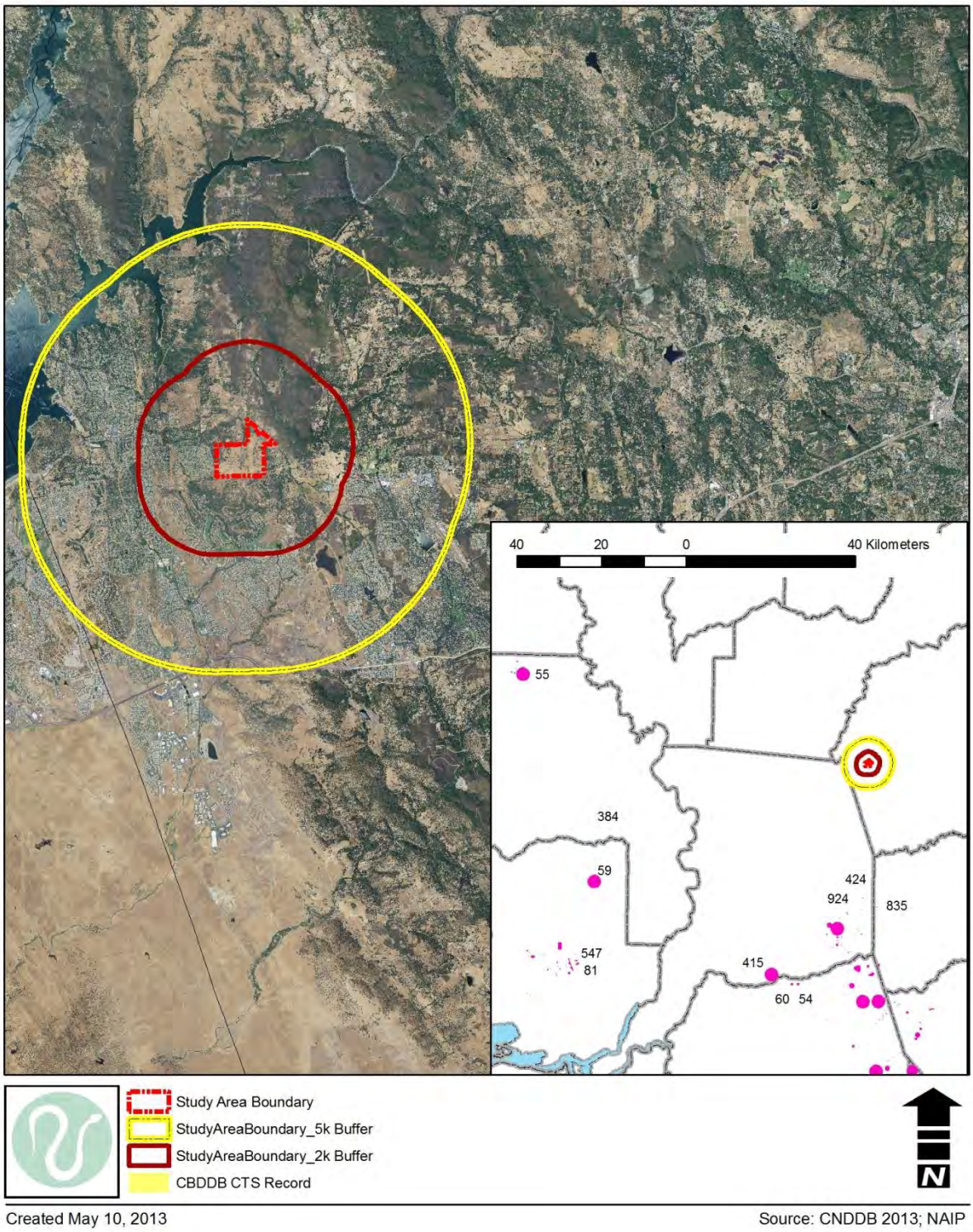
**Element 2 —** The project site is situated approximately 20 miles east of the known range of California tiger salamander records associated with the foothills of the Sierra Nevada (Jennings and Hayes 1994, CNDDB 2013). No records fall within 3.1 miles (5 km) of the project site; one record (CNDDB Occurrence 424) falls within 19.6 miles of the project site. Representative records from the nearest population clusters and their distance from the project site are reported in Table 1 and are depicted in Figure 1 and Figure 4.

**Element 3 —** Habitats associated with Green Springs Creek, the Louie Pond impoundment, and the local drainages possess both aquatic and upland characteristics that are marginally suitable for California tiger salamanders. Aquatic habitats consist of interconnected streams, swales, and associated ponds/wetlands. Terrestrial habitats consist mostly of foothill oak woodland with at least some evidence of ground squirrel (*Otospermophilus* [= *Spermophilus*] *beecheyi*) habitation. Habitats are described in detail below. Photographs of selected site features are included in Appendix A.

**Table 1. Representative CNDDB occurrence records nearest to the project site**

| Occ. No. | USGS 7.5' Topographic Quadrangle | Township | Range | Section | County | Year Last Seen | Approx.Distance from Project Site | Elevation |
|---|---|---|---|---|---|---|---|---|
| 54 | Lockeford | 05N | 07E | 32 | San Joaquin | 1974 | 33.9 mi | 70 ft |
| 59 | Dixon | 07N | 02E | 17 | Solano | 1959 | 43.7 mi | 50 ft |
| 60 | Lockeford | 05N | 07E | 32 | San Joaquin | 1974 | 34.1 mi | 55 ft |
| 81 | Dozier | -- | -- | -- | Solano | -- | 51.8 mi | -- |
| 384 | Byron Hot Springs | 01S | 03E | 17 | Contra Costa | 2006 | 41.3 mi | 150 ft |
| 415 | Galt | 05N | 08E | 27 | Sacramento | 1914 | 33.9 mi | 50 ft |
| 424 | Carbondale | 07N | 08E | 36 | Sacramento | 2004 | 19.6 mi | 180 ft |
| 547 | Dozier | 05N | 01E | 14 | Solano | 2007 | 51.5 mi | 23 ft |
| 835 | Carbondale | 06N | 08E | 11 | Sacramento | 2005 | 21.1 mi | 250 ft |
| 924 | Carbobdale | 06N | 09E | 05 | Amador | 2002 | 21.4 mi | 210 ft |

**FIGURE 4. HABITATS WITHIN THE PROJECT SITE AND WITHIN 1.24 MILES (2 KM) OF THE PROJECT BOUNDARIES**




Created May 10, 2013

Source: CNDDB 2013; NAIP

### *Plant Communities*

Plant communities are described by Gibson & Skordal (2011). The study area encompasses several habitat types including non-native annual grasslands, foothill oak savannah/woodland, and numerous water features including agricultural ponds, intermittent and ephemeral drainages, seasonal wetlands, and seeps. The majority of the site supports oak savannah/woodland composed of valley oaks (*Quercus lobata*), live oaks (*Quercus wislizenii*), and blue oaks (*Quercus douglasii*).

The understory consists of dogtail (*Cynosurus echinatus*), wild oats (*Avena fatua*), rip-gut brome (*Bromus diandrus*), medusa head (*Taeniatherum caput-medusae*), and soft chess (*Bromus hordeaceus*). Interspersed between the oak woodlands/savannah are areas of non-native annual grasslands characterized by wild oats (*Avena fatua*), ripgut brome (*Bromus diandrus*), and medusa-head (*Taeniatherum caput-medusae*). Other common species include yellow start-thistle (*Centaurea solstitialis*), perennial rye grass (*Lolium perenne*), little quacking grass (*Briza minor*), soft chess (*Bromus hordeaceus*), prickly lettuce (*Lactuca serriola*), and split-leaf geranium (*Geranium dissectum*).

### *Hydrology*

Wetland components are described by Gibson & Skordal (2012). Green Springs Creek and two in-channel impoundments referred to as the Louie Ponds represent the largest water features within the study area. Green Springs Creek and its associated ponds contained several inches of flowing water and supported thick growths of hardstem bulrush (*Scirpus acutus*), creeping spike rush (*Eleocharis macrostachya*), and narrow-leaf cattails (*Typha angustifolia*). Woody vegetation consisted of cottonwoods (*Populus fremontii*) and narrow-leaf willow (*Salix exigua*). Several wetland swale-seep complexes are located within the hillier southern portion of study area. Seeps are most often associated with sloping terrain and derived primarily from groundwater seepage in the winter and spring, while seasonal wetland swales represent vegetated linear sloping drainages that lack a defined bed and bank. Common species included Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), curly dock (*Rumex crispus*), perennial rye grass (*Lolium perenne*), water cress (*Rorippa nasturtium-aquaticum*), tall flat sedge (*Cyperus eragrostis*), and spiny-fruited buttercup (*Ranunculus muricatus*). Photographs of the individual features are provided in Appendix A.

### *Soils*

According to the April 1974, "**Soil Survey of El Dorado Area, California**," four soil map units occur within the study area: Auburn very rocky silt loam, 2-30 percent slopes (AxD), Auburn silt loam, 2-30 percent slopes (AwD), Placer diggings (PrD), and Serpentine Rock Land (SaF).

### *Observed Species*

Adult bullfrogs and juvenile Centrarchid fishes (*Lepomis* spp.) were observed within Green Springs Creek and Louie Pond, both of which can compete with and prey upon California tiger salamanders. Larval Western toad (*Bufo boreas*) and Sierran treefrog (formerly *Pseudachris regilla* - Pacific Treefrog) were also observed, but neither are known to adversely affect California tiger salamanders.

## SUMMARY

Potential permanent, marginal California tiger salamander habitat is present on the project site within existing uplands. Potential breeding habitat exists on site in the impoundment of Green Springs Creek referred to as Louie Pond. The proposed project is anticipated to result in a reduction in upland habitat, but no breeding habitat removal is expected.

The project site lies approximately 19 miles north of the northernmost records situated along the Sierra Nevada foothills. Although California tiger salamanders range as high as 3,458 feet, the project site lies at higher elevation than the preponderance of known California tiger salamander records in this portion of the western Sierra Nevada foothills (CNDDB 2013). Despite the presence of suitable habitat and fact that the project site falls within known elevation limits, the presence of predatory species and distance from known populations within this portion of the species' range suggests that California tiger salamanders are unlikely to occur on the project site. Therefore, impacts to California tiger salamanders are not anticipated as part of the proposed project.

## REFERENCES


Anderson, P.R. 1968. The reproductive and developmental history of the California tiger salamander. Master's Thesis, Department of Biology, Fresno State College, Fresno, CA.

California Natural Diversity Database (CNDDB). Commercial Version, April 2013. Geographic Information Systems (GIS) data and computer printout of sensitive species records in California. California Department of Fish and Game, Natural Heritage Division, Sacramento, CA.

Feaver, P.E. 1971. Breeding pool selection and larval mortality of three California amphibians: Ambystoma tigrinum californiense Gray, Hyla regilla Baird and Girard and Scaphiopus hammondi hammondi Girard. Master's Thesis, Department of Biology, Fresno State College, Fresno, California. 58 pp.

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Jennings, R.M. and M.P. Hayes. 1994. Amphibian and reptile species of special concern in California. Final report submitted to the California Department of Fish and Game Inland Fisheries Division, Rancho Cordova, CA: Contract 8023. 255 pp.

U.S. Fish and Wildlife Service (USFWS). 2004a. Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the Sonoma County Distinct Population Segment of the California Tiger Salamander; Final Rule. Federal Register 67(140):47758-47760.

U.S. Fish and Wildlife Service (USFWS). 2004b. Endangered and threatened wildlife and plants; determination of threatened status for the California tiger salamander; and special rule exemption for existing routine ranching activities; final rule. Federal Register 69:47211-47248.

# Appendix A: Photographs



1. Outflow to lower pond (NW).



2. Lower pond (WNW).



3. Lower pond showing vegetation at center crossing (NW).



4. S side lower pond showing edge characteristics - center crossing in background (NNE).



5. S side of lower pond showing edge characteristics - center crossing in background (NW).



6. One of many adult bullfrogs observed in upper pond (east end).



7. Outflow from upper (E end) pond (SE).



8. Lower pond showing vegetation at center crossing (SE).



9. Gravel-bottomed channel of Green Springs Creek flowing into upper pond (NW). Hardstem bulrush in background.



10. Gravel-bottomed channel of Green Springs Creek flowing into upper pond (SE). Hardstem bulrush in background.



11. Overhanging vegetation (*Rubus* spp.) along the margin of Green Springs Creek (W).



12. Intermittent riffles along Green Springs Creek (ESE).



13. Green Springs Creek at the E end of the project site (WNW).



14. Green Springs Creek upstream of the E end of the project site (SE).



15. Western toad larvae in Green Springs Creek at the E end of the project site.



16. Seasonal wet swale at the W center of the project site (see Figure 2).



17. Seasonal wet swale at the E center of the project site (see Figure 2).



18. Depressional seep at the southern edge of the project site (see Figure 2).

# Attachment E

**Aquatic Resources Delineation Documentation for the Study Area**

MADRONE ECOLOGICAL CONSULTING

8421 Auburn Blvd., Suite 248
Citrus Heights, CA 95610
www.madroneeco.com
(916) 822-3230

8 August 2022

Regulatory Project Manager
California South Branch, Regulatory Division
U.S. Army Corps of Engineers, Sacramento District
1325 J Street, Room 1350
Sacramento, California 95814

**Subject:** **Request for Preliminary and Approved Jurisdictional Determinations for the Generations at Green Valley Project in El Dorado County, California (SPK 2011-00758)**

Dear Sir or Madam,

The Generations at Green Valley Project site was originally delineated by Gibson & Skordal, LLC (G&S) under the project name of Dixon Ranch (SPK 2011-00758). The U.S. Army Corps of Engineers (USACE) issued a Preliminary Jurisdictional Determination (PJD) for the G&S wetland delineation for Dixon Ranch on 26 August 2011. This PJD, including the associated map, is included as **Attachment A**. Since 2011, the proposed project has been revised and been renamed, and the project boundaries have changed. These new project boundaries now include expected off-site infrastructure improvements. We have prepared this package to summarize these changes, and request both a Preliminary Jurisdictional Determination and an Approved Jurisdictional Determination of the Aquatic Resources Delineation map included in **Attachment B** (as detailed below). Preparation of this package involved both surveys of the new portions of the Study Area (which are discussed below), as well as surveys throughout the previously verified portions of the Study Area to document any changes that may have occurred in the intervening time. These surveys were conducted by Senior Biologist Daria Snider and Biologist Matt Shaffer on 26 April, 7 and 24 May, and 9 June 2021.

**Changes to Project Boundaries**

The majority of the main project site has remained the same; however, small slivers of additional area were added along the southern and eastern boundaries to reflect the surveyed parcel boundaries. In addition, a few small parcels along Green Valley Road were removed from the Project, and portions of Green Valley Road have been added to the Project Area in anticipation of required road improvements. The exhibit provided in **Attachment C** shows the original verified boundary in comparison to the current Project Boundary.

**Changes to Land Use within the Project Area**

Since 2011, the land use within the vast majority of the Project Area has remained unchanged. Surveys conducted by Ms. Snider throughout the site indicated that the previously mapped aquatic resources were very consistent with current conditions. Hydrology changes upstream of the Project site on Green Springs Creek have resulted in a shorter duration of inundation for the ponds, but the extent of inundation remains the

same. The only changes observed by Ms. Snider were in the northeastern-most parcels, where an active berry farm and associated fruit stand have been abandoned, and a large amount of grading occurred in the general vicinity. The grading did not leave the ground entirely flat, and some hydrophytic vegetation has established in some of the lower areas. However, three parameter data were collected in representative depressions, and hydric soils and wetland hydrology indicators were not found. As a result, these areas appear to be mesic areas in winter, and no aquatic resources were added to the map in these locations. One small depressional seasonal wetland was added to the delineation along an abandoned dirt road, and a seasonal wetland swale just to the northwest (SW1) was reclassified to a depressional seasonal wetland. In addition, wetland types were adjusted to match nomenclature that Madrone typically uses for aquatic resources delineations. All of these modifications are reflected in the aquatic resources delineation map included in **Attachment B**.

**Extent of USACE Jurisdiction**

The extent of USACE jurisdiction has fluctuated substantially in the past several years; however, the current definition of Waters of the U.S. relies on the pre-2015 regulatory regime, which interprets the 1986 Waters of the U.S. definition in light of the *Rapanos v. United States* and *Carabell v. United States* Supreme Court Decisions. Under this regime, the vast majority of the aquatic resources within the Study Area would most likely be considered Waters of the U.S. either because they fall into a clearly jurisdictional category (such as wetlands abutting a Relatively Permanent Water) or because they could have a significant nexus to a Traditional Navigable Water. This includes four roadside ditch segments that appear to be a re-routed stream channel. These aquatic resources have been grouped into Study Area 1 on the map in **Attachment B**, and we are requesting a Preliminary Jurisdictional Determination for Study Area 1.

Conversely, twelve roadside ditches were constructed in uplands along either side of Green Valley Road during construction of that road, and currently drain only uplands (primarily the roadway they service). Furthermore, these features do not appear to be re-routed stream channels. These aquatic resources have been grouped into Study Area 2 on the map in **Attachment B**. We feel that these features are excluded from USACE jurisdiction, and as a result, we are requesting an Approved Jurisdictional Determination for Study Area 2, which we assert does not contain any Waters of the U.S.

In summary, we are requesting a Preliminary Jurisdictional Determination for Study Area 1 and an Approved Jurisdictional Determination for Study Area 2 on the map included as **Attachment B**. An ORM spreadsheet and GIS shapefiles are being transmitted to you digitally with this letter. The current owner is Green Valley Road Benefits, LLC and their contact information is provided below. If you have any questions or require additional information, please contact me at (916) 822-3230, or at gfodge@madroneeco.com.

Sincerely,

Ginger E. Fodge
Principal

Attachments

cc: Mr. Aidan Barry
Green Valley Road Benefits, LLC
110 Blue Ravine Road, Suite 209
Folsom CA 95630

# Attachments

Attachment A:  Preliminary Jurisdictional Determination for Dixon Ranch (SPK 2011-00758)

Attachment B:  Aquatic Resources Delineation Map for Generations at Green Valley

Attachment C:  Comparison of Dixon Ranch PJD Study Area to Current Study Area

# Attachment A

**Preliminary Jurisdictional Determination**
**for Dixon Ranch (SPK 2011-00758)**

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO CA 95814-2922

REPLY TO
ATTENTION OF

August 26, 2011

Regulatory Division SPK-2011-00758

Mr. Joel Korotkin
Dixon Ranch Partners, LLC
949 Tuscan Lane
Sacramento, California 95864

Dear Mr. Korotkin:

We are responding to your August 3, 2011, request for a preliminary jurisdictional determination (JD), in accordance with our Regulatory Guidance Letter (RGL) 08-02, for the Dixon Ranch site. The approximately 296-acre site is located on Section 24, Township 10 North, Range 8 East, Mount Diablo Meridian, Latitude 38.7046°, Longitude -121.0466°, El Dorado Hills, El Dorado County, California.

Based on available information, **we concur with the estimate of potential waters of the United States, as depicted on the August 2011, Jurisdictional Delineation, Dixon Ranch, El Dorado County, California, drawing prepared by Gibson & Skordal, LLC** (enclosure 1). The approximately 7.4145 acres of wetlands or other water bodies present within the survey area may be jurisdictional waters of the United States. These waters may be regulated under Section 404 of the Clean Water Act.

A copy of our RGL 08-02 Preliminary Jurisdictional Determination Form for this site is enclosed. Please sign and return a copy of the completed form to this office (enclosure 2). Once we receive a copy of the form with your signature we can accept and process a Pre-Construction Notification or permit application for your proposed project.

You should not start any work in potentially jurisdictional waters of the United States unless you have Department of the Army permit authorization. You may request an approved JD for this site at any time prior to starting work within waters. In certain circumstances, as described in RGL 08-02, an approved JD may later be necessary.

You should provide a copy of this letter and notice to all other affected parties, including any individual who has an identifiable and substantial legal interest in the property.

This preliminary determination has been conducted to identify the potential limits of wetlands and other water bodies which may be subject to Corps of Engineers' jurisdiction for the particular site identified in this request. A Notification of Appeal Process and Request for Appeal (RFA) form is enclosed to notify you of your options with this determination (enclosure 3).

This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

We appreciate your feedback. At your earliest convenience, please tell us how we are doing by completing the customer survey on our website under *Customer Service Survey*.

Please refer to identification number SPK-2011-00758 in any correspondence concerning this project. If you have any questions, please contact Mr. Peck Ha at our California North Branch Office, Regulatory Division, Sacramento District, U.S. Army Corps of Engineers, 650 Capitol Mall, Suite 5-200, Sacramento, California 95814-2922, email *Peck.Ha@usace.army.mil*, or telephone 916-557-6617. For more information regarding our program, please visit our website at *www.spk.usace.army.mil/regulatory.html*.

Sincerely,

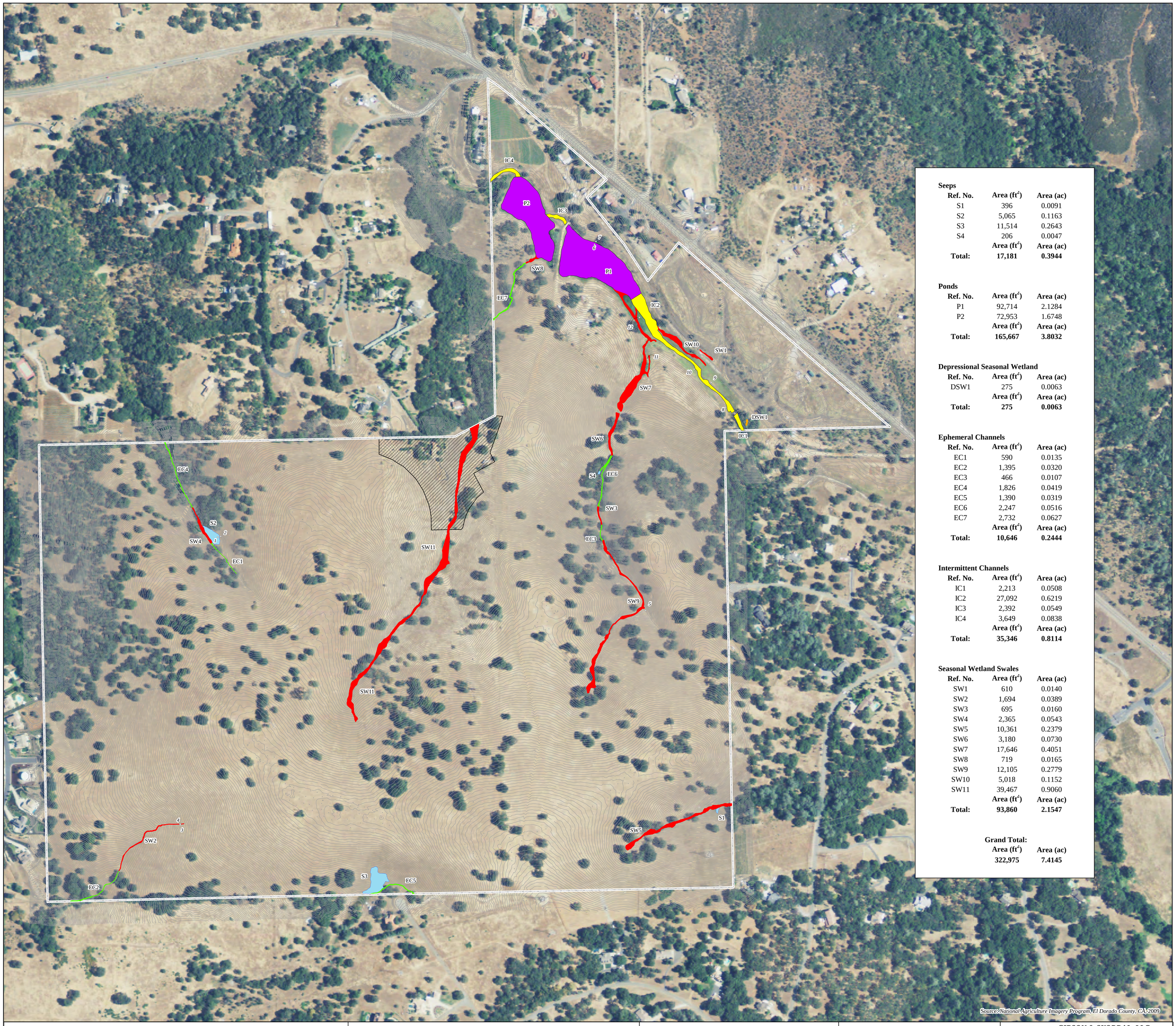
ORIGINAL SIGNED

Nancy Arcady Haley
Chief, California North Branch

Enclosures

Copies Furnished with enclosure 1:

Mr. Dan Radulescu, Storm Water and Water Quality Certification Unit, California Regional Water Quality Control Board, Central Valley Region, 11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114
Mr. Kent Smith, California Department of Fish and Game, Region 2, 1701 Nimbus Drive, Rancho Cordova, California 95670-4599
Ms. Kim Squires, Forest Foothill Branch, U.S. Fish and Wildlife Service, Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, California 95825-3901
Mr. Jason Brush, Environmental Protection Agency, WRT-8, 75 Hawthorne Street, San Francisco, California 94105
Mr. Jim Gibson, Gibson & Skordal, LLC, 2277 Fair Oaks Blvd, Suite 105, Sacramento, California 95825
El Dorado County Planning Department, 2850 Fairlane Court, Placerville, California 95667-4103




**Seeps**

| Ref. No. | Area (ft²) | Area (ac) |
|---|---|---|
| S1 | 396 | 0.0091 |
| S2 | 5,065 | 0.1163 |
| S3 | 11,514 | 0.2643 |
| S4 | 206 | 0.0047 |
| | **Area (ft²)** | **Area (ac)** |
| **Total:** | **17,181** | **0.3944** |

**Ponds**

| Ref. No. | Area (ft²) | Area (ac) |
|---|---|---|
| P1 | 92,714 | 2.1284 |
| P2 | 72,953 | 1.6748 |
| | **Area (ft²)** | **Area (ac)** |
| **Total:** | **165,667** | **3.8032** |

**Depressional Seasonal Wetland**

| Ref. No. | Area (ft²) | Area (ac) |
|---|---|---|
| DSW1 | 275 | 0.0063 |
| | **Area (ft²)** | **Area (ac)** |
| **Total:** | **275** | **0.0063** |

**Ephemeral Channels**

| Ref. No. | Area (ft²) | Area (ac) |
|---|---|---|
| EC1 | 590 | 0.0135 |
| EC2 | 1,395 | 0.0320 |
| EC3 | 466 | 0.0107 |
| EC4 | 1,826 | 0.0419 |
| EC5 | 1,390 | 0.0319 |
| EC6 | 2,247 | 0.0516 |
| EC7 | 2,732 | 0.0627 |
| | **Area (ft²)** | **Area (ac)** |
| **Total:** | **10,646** | **0.2444** |

**Intermittent Channels**

| Ref. No. | Area (ft²) | Area (ac) |
|---|---|---|
| IC1 | 2,213 | 0.0508 |
| IC2 | 27,092 | 0.6219 |
| IC3 | 2,392 | 0.0549 |
| IC4 | 3,649 | 0.0838 |
| | **Area (ft²)** | **Area (ac)** |
| **Total:** | **35,346** | **0.8114** |

**Seasonal Wetland Swales**

| Ref. No. | Area (ft²) | Area (ac) |
|---|---|---|
| SW1 | 610 | 0.0140 |
| SW2 | 1,694 | 0.0389 |
| SW3 | 695 | 0.0160 |
| SW4 | 2,365 | 0.0543 |
| SW5 | 10,361 | 0.2379 |
| SW6 | 3,180 | 0.0730 |
| SW7 | 17,646 | 0.4051 |
| SW8 | 719 | 0.0165 |
| SW9 | 12,105 | 0.2779 |
| SW10 | 5,018 | 0.1152 |
| SW11 | 39,467 | 0.9060 |
| | **Area (ft²)** | **Area (ac)** |
| **Total:** | **93,860** | **2.1547** |

**Grand Total:**

| Area (ft²) | Area (ac) |
|---|---|
| **322,975** | **7.4145** |

Source: *National Agriculture Imagery Program, El Dorado County, CA, 2009*

# Revised Jurisdictional Delineation
# Dixon Ranch
## El Dorado County, California

- Dedicated to Others
- Data Point
- Depressional Seasonal Wetland
- Seep
- Seasonal Wetland Swale
- Pond
- Ephemeral Channel
- Intermittent Channel
- Study Area Boundary (+/-296 acres)

N

0 200 400 800

Feet

*Prepared For:*

Dixon Ranch Partners, LLC
949 Tuscan Lane
Sacramento, California 95864

***GIBSON & SKORDAL, LLC***
***WETLAND CONSULANTS***
*2277 Fair Oaks Blvd., Ste. 105*
*Sacramento, CA 95825*
*Telephone: (916) 569-1830*

*Prepared By:* M. Hirkala

*Prepared Date:* August 2011

*Revised Date:*

*Aerial Photo:* July 3, 2009

# Attachment B

**Aquatic Resources Delineation Map**
**for Generations at Green Valley**

RD-1
-121.05075/
38.713654
Green Valley Road
RD-2
RD-3
RD-4
RD-5
RD-6
RD-7
RD-8
-121.045191/
38.713034
RD-9
ID-4
P-2
RD-10
ID-3
SWS-7
P-1
ED-7
-121.040525/
38.70975
RD-11
RD-12
Green Valley Road
SWS-9
SW-3
SWS-6
ID-2
SW-2
DP6
DP5
DP3
DP4
DP2
DP1
ID-1
SW-1
-121.040532/
38.707338
SWS-5
RD-13
RD-14
-121.035592/
38.706524
RD-15
RD-16
S-4
ED-6
SWS-2
ED-3
SWS-8
-121.045198/
38.707665
-121.054512/
38.707847
ED-4
SWS-3
S-2
ED-1
SWS-10
SWS-1
ED-2
S-3
ED-5
S-1
SWS-4
-121.054531/
38.700047
-121.04055/
38.700046

## AQUATIC RESOURCE FEATURES

### STUDY AREA 1

#### WETLANDS

**Seasonal Wetlands**

| Feature ID | Acreage |
|---|---|
| SW-1 | 0.006 |
| SW-2 | 0.019 |
| SW-3 | <0.001 |
| **Total:** | 0.025 |

**Seasonal Wetland Swales**

| Feature ID | Acreage |
|---|---|
| SWS-1 | 0.039 |
| SWS-2 | 0.016 |
| SWS-3 | 0.054 |
| SWS-4 | 0.238 |
| SWS-5 | 0.073 |
| SWS-6 | 0.405 |
| SWS-7 | 0.017 |
| SWS-8 | 0.278 |
| SWS-9 | 0.115 |
| SWS-10 | 0.906 |
| **Total:** | 2.141 |

**Seeps**

| Feature ID | Acreage |
|---|---|
| S-1 | 0.009 |
| S-2 | 0.116 |
| S-3 | 0.264 |
| S-4 | 0.005 |
| **Total:** | 0.394 |

**Total Wetlands:** 2.560

#### OTHER WATERS

**Ephemeral Drainage**

| Feature ID | Acreage | Linear Feet |
|---|---|---|
| ED-1 | 0.014 | 239 |
| ED-2 | 0.032 | 359 |
| ED-3 | 0.011 | 100 |
| ED-4 | 0.042 | 414 |
| ED-5 | 0.032 | 274 |
| ED-6 | 0.052 | 363 |
| ED-7 | 0.063 | 427 |
| **Total:** | 0.246 | 2,176 |

**Intermittent Drainage**

| Feature ID | Acreage | Linear Feet |
|---|---|---|
| ID-1 | 0.051 | 103 |
| ID-2 | 0.622 | 901 |
| ID-3 | 0.055 | 125 |
| ID-4 | 0.084 | 199 |
| **Total:** | 0.812 | 1,328 |

**Pond**

| Feature ID | Acreage |
|---|---|
| P-1 | 2.128 |
| P-2 | 1.675 |
| **Total:** | 3.803 |

**Roadside Ditch**

| Feature ID | Acreage | Linear Feet |
|---|---|---|
| RD-6 | 0.005 | 26 |
| RD-7 | 0.003 | 70 |
| RD-8 | <0.001 | 7 |
| RD-9 | 0.002 | 47 |
| **Total:** | 0.010 | 150 |

**Total Other Waters:** 4.871 3,654

**Study Area 1 Total Aquatic Resources: 7.431 acres**

## AQUATIC RESOURCE FEATURES

### STUDY AREA 2

#### OTHER WATERS

**Roadside Ditch**

| Feature ID | Acreage | Linear Feet |
|---|---|---|
| RD-1 | <0.001 | 10 |
| RD-2 | <0.001 | 18 |
| RD-3 | 0.001 | 37 |
| RD-4 | <0.001 | 15 |
| RD-5 | <0.001 | 14 |
| RD-10 | 0.002 | 49 |
| RD-11 | 0.003 | 147 |
| RD-12 | 0.001 | 40 |
| RD-13 | 0.007 | 301 |
| RD-14 | <0.001 | 6 |
| RD-15 | 0.003 | 136 |
| RD-16 | <0.001 | 10 |
| **Total:** | 0.017 | 783 |

**Total Other Waters:** 0.017 783

**Study Area 2 Total Aquatic Resources: 0.017 acre**

**Notes:**
**Map Scale:** 1 inch = 200 feet
**Coordinate System:** NAD 1983 State Plane California II
**Datum:** NAD83 (North American Datum 1983)
**Projection:** Lambert Conformal Conic
**Vertical Data:** NAVD88 (North American Vertical Datum 1988)
**Aerial Base:** Maxar
**Aerial Base Flown:** 27 February 2021 and 4 March 2021
**Topographic Contours:** USGS NED 1/3 arc-second Contours for Sacramento W, California. 1 October 2018

**Delineation Performed by:** J. Gibson, M. Hirkala, and D. Snider
**Original Delineation Verification Date:** 26 August 2011
**Original Identification Number:** SPK-2011-00758
**Map Prepared by:** N. Bente
**Date Map Prepared:** 15 February 2022
**Definitions:**
NAD = North American Datum
NAVD = North American Vertical Datum
NED = National Elevation Datase
USGS = United States Geological Survey

**Prepared For:**
**The True Life Companies**
110 Blue Ravine Road, Suite 209
Folsom, California 95630

N
Feet
0 100 200

- Study Area 1 (283 acres)
- Study Area 2 (18 acres)
- Reference Point
- Ground Surface Elevation, 10 foot contour
- Data Point
- Culvert
- Ground Surface Elevation, 10 foot contour

**Study Area 1 Aquatic Resources (7.431 acres)**
**Wetlands (2.560 acres)**
- Seasonal Wetland (0.025 acre)
- Seasonal Wetland Swale (2.141 acres)
- Seep (0.394 acre)

**Other Waters (4.871 acres)**
- Ephemeral Drainage (0.246 acre)
- Intermittent Drainage (0.812 acre)
- Pond (3.803 acres)
- Roadside Ditch (0.010 acre)

**Study Area 2 Aquatic Resources (0.017 acres)**
**Other Waters (0.017 acre)**
- Roadside Ditch (0.017 acre)

# Aquatic Resources Delineation

Generations at Green Valley Road
El Dorado County, California

MADRONE ECOLOGICAL CONSULTING
8421 Auburn Boulevard, Suite 248
Citrus Heights, California 95610
(916) 822.3230 | www.madroneeco.com

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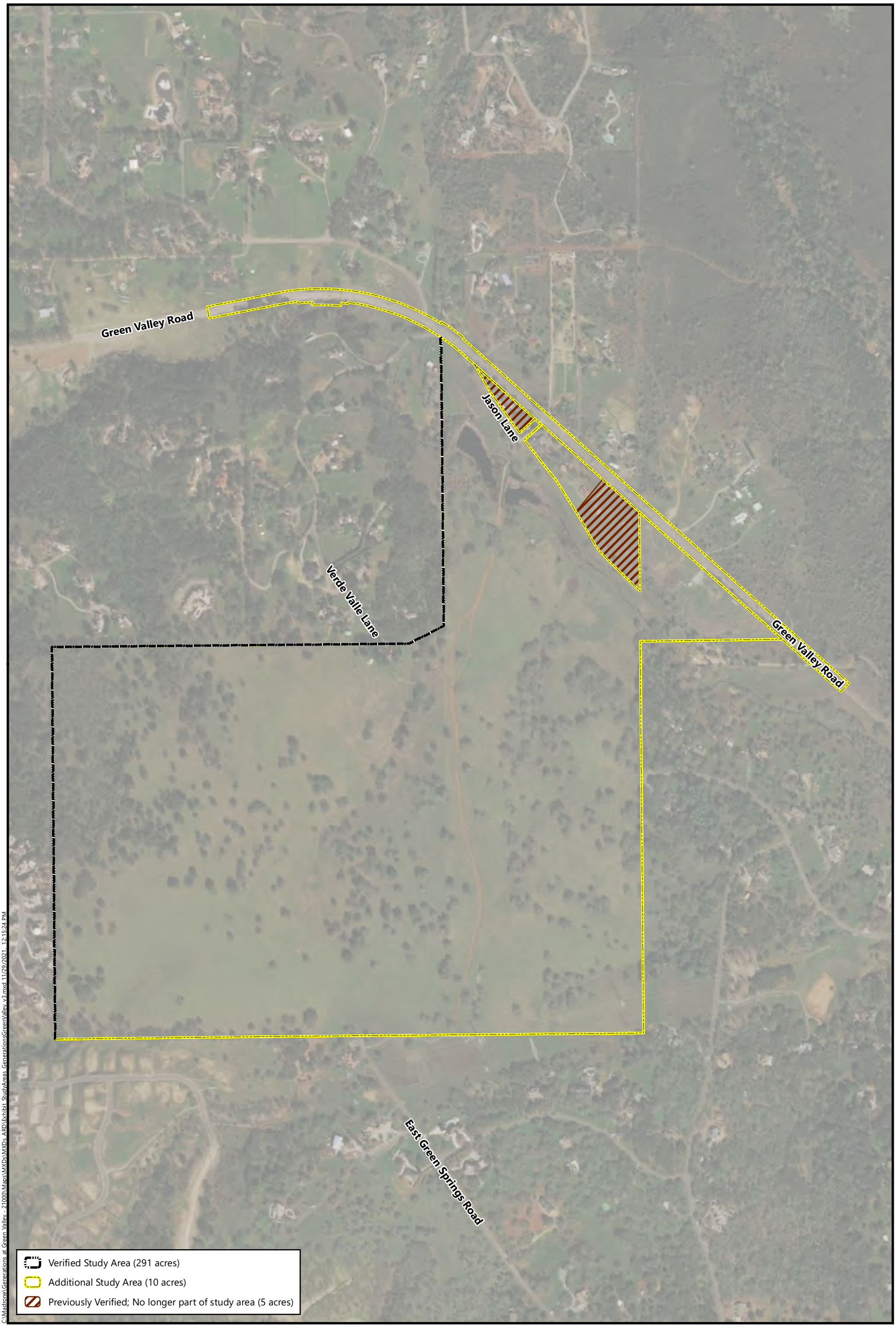
# Attachment C

**Comparison of Dixon Ranch**
**PJD Study Area**
**to Current Study Area**

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**Study Areas**

*Generations at Green Valley*
*El Dorado County, California*

MADRONE ECOLOGICAL CONSULTING

**Aerial Source:** Maxar, 27 February 2021 and 4 March 2021.

# Attachment G

**Oak Woodland Assessment**

MADRONE ECOLOGICAL CONSULTING

# Memo

To: Aidan Barry, Green Valley Road Benefits, LLC

From: Daria Snider, Senior Biologist

Date: 18 November 2021, updated 10 November 2022

Subject: Generations at Green Valley - Oak Woodland Assessment and Mitigation Summary

Dear Mr. Barry:

At your request, I have completed an assessment of the extent of Oak Woodlands on the Generations at Green Valley Property (Study Area). We originally provided a report of our assessment to you on 18 November 2021. This version updates the Study Area acreage, which has been modified since the time of our original report.

Oak Woodlands were mapped as defined in *El Dorado County Oak Resources Management Plan* (ORMP), dated September 2017. The ORMP defines Oak Woodlands consistent with the state Oak Woodlands Conservation Act as "an oak stand with greater than ten percent canopy cover." This definition leaves considerable ambiguity regarding minimum mapping units and how much interstitial grassland to include in woodlands. I have mapped the Oak Woodlands within the Study Area on the attached exhibit as seemed appropriate to me during preliminary aerial analysis and my subsequent field survey of the site on 19 February 2021. Although there are certainly individual oak trees (which are also regulated under the ORMP) that are not included within the mapped Oak Woodlands, the density of trees outside of the polygons did not appear to me to constitute an Oak Woodland. Furthermore, the herbaceous understory vegetation within the Oak Woodlands on-site is slightly different than the surrounding grasslands. The majority of the annual grasslands within the Project site are dominated by non-native bromes (*Bromus* species) and medusahead grass (*Elymus caput-medusae*), but the oak woodlands also have substantial cover of hedgehog dogtail grass (*Cynosurus echinatus*). The Oak Woodlands were mapped based on a combination of observed tree density and understory vegetation patterns. I have mapped 109.2 acres of Oak Woodland within the 301-acre Study Area. Representative photographs of oak woodlands and isolated trees are attached.

Mitigation for impacts to oak trees within El Dorado County is detailed in the ORMP. For your convenience, I have summarized these mitigation measures below.

**Oak Woodland Mitigation**

| Percent of Oak Woodland Impact | Oak Woodland Mitigation Ratio |
|---|---|
| 0-50% | 1:1 |
| 50.1-75% | 1.5:1 |
| 75.1-100% | 2:1 |

The current Oak Woodland In-Lieu Mitigation Fee is $8,285/acre.

For example, if 50% (54.6 acres) of the Oak Woodland within the Study Area was removed, then 54.6 acres (1:1 ratio) of in-lieu fee would be assessed, and the total cost would be $452,361. If 60% (65.5 acres) were removed, then 98.1 acres (1.5:1 ratio) of in-lieu fee would be assessed, and the total cost would be $814,001.

Oak woodland mitigation reductions are available on a tiered scale for incorporation of affordable housing. For example, incorporating 5% Moderate Income Affordable Housing would result in a reduction of 2.5% of the total oak woodland mitigation.

**Individual Oak Trees**
Individual Oak Trees are defined as all oak trees that are in areas not mapped as Oak Woodland with a Diameter at Breast Height (DBH) greater than 6" or a cumulative DBH greater than 10", but below 36".

The In-lieu Mitigation Fee for impacts to Individual Oak Trees is $153 per inch.

As an example, the in-lieu fee for removal of a 6" DBH oak tree would be $918, and the in-lieu fee for removal of a 24" DBH oak tree would be $3,672.

**Heritage Oak Trees**
Heritage Oak Trees are defined as all oak trees with a DBH of 36" or greater, regardless of whether they are located in an Oak Woodland.

The In-lieu Mitigation Fee for impacts to Heritage Oak Trees is $459 per inch.

As an example, the in-lieu fee for removal of a 36" DBH oak tree would be $16,524.

We appreciate the opportunity to assist you with this review. Please contact me or Ginger Fodge at (916) 822-3230 if you have any questions regarding this information.

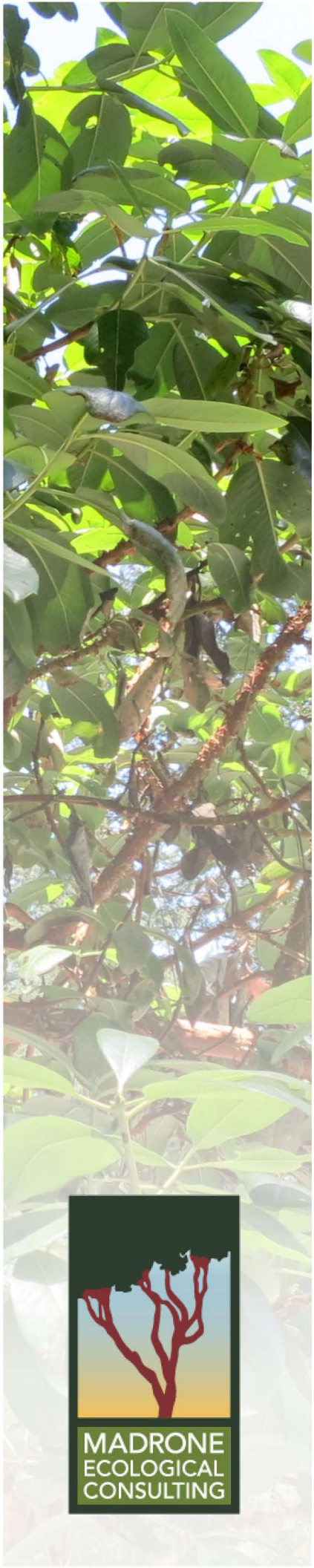



**Oak Woodland Map**

*Generations at Green Valley*
*El Dorado County, California*

MADRONE ECOLOGICAL CONSULTING

**Study Area Boundaries Source:** CTA Engineering & Surveying, 26 October 2022.
**Aerial Source:** Maxar, 1 May 2022.



# Biological Resources Assessment

## Generations at Green Valley

El Dorado County

April 2024

MADRONE ECOLOGICAL CONSULTING

**Prepared for:**
Green Valley Road Benefits, LLC
110 Blue Ravine Road, Suite 103
Folsom, California 95630

**Recommended Citation:**
Madrone Ecological Consulting, LLC (Madrone). 2024. *Biological Resources Assessment for Generations at Green Valley*. Prepared for Green Valley Road Benefits, LLC. Published on 2 April 2024.

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Attachment B. CNDDB Query Results for the "Clarksville, California" Quadrangle and Eight Surrounding Quadrangles
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# 1.0 INTRODUCTION

This report presents the results of a Biological Resources Assessment (BRA) for the Generations at Green Valley Project (Project). The 314-acre Generations at Green Valley overall study area (Study Area), which includes a 301-acre on-site development area dominated by the subdivision site and 13 acres of off-site infrastructure development areas that may be impacted as a result of Project construction, is generally located along and south of Green Valley Road in unincorporated El Dorado County, California. The on-site portion of the Study Area is located at 3200 Verde Valle Road (APN 126-020-001) within portions of Section 19, Township 10 North, Range 9 East (MDB&M) and Section 24, Township 10 North, Range 8 East of the "Clarksville, California" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2021) (**Figure 1**). Off-site infrastructure areas include (1) areas adjacent to the on-site portion of the Study Area along Green Valley Road and western and southern on-site access points (referred to as off-site adjacent areas); (2) an area approximately 0.6 mile west of the on-site portion along an El Dorado Irrigation District (EID) sewer easement and at a sewer lift station between Appian Way and Loch Way (referred to as the northwestern off-site area throughout this document); and (3) an area approximately 1.1 mile southwest of the on-site portion along a Sacramento Municipal Utility District (SMUD) easement that currently follows an existing paved bike trail (referred to as the southwestern off-site area throughout this document). While the impact areas for the on-site portion of the Study Area are well defined, the potential impact limits within the off-site areas are unknown at this time. As such, this assessment assumes a maximum development footprint for the off-site areas.

## 1.1 Project Description

The Project is a residential subdivision with supporting infrastructure (**Attachment A**). The preliminary tentative subdivision map shows 379 single-family lots, landscape lots, open space lots, a park lot, a clubhouse lot, and on-site detention basins. As proposed, the subdivision will have two main entrances off of Green Valley Road and three emergency vehicle accesses (EVAs) to the south, east, and north. Construction of the EVAs will result in minor impacts where EVAs connect to existing roadways. Off-site improvements include Green Valley Road roadway access modifications, upgrades to an existing sewer lift station just north of Loch Way in the northwestern off-site areas, and installation of utilities such as sanitary sewer system and potable water connections along Green Valley Road (water), Green Springs Road (water), the EID easement (sanitary sewer; northwestern off-site area), and the SMUD easement (sanitary sewer; southwestern off-site area).

To the extent feasible, existing aquatic resources will be avoided. In some areas, drainage may be discharged to existing seasonal wetland swales, ephemeral drainages, and/or intermittent drainages. Where roads cross intermittent and ephemeral drainages and seasonal wetland swales, direct impacts to these features will be avoided by using a type of crossing that does not require the discharge of fill in these areas (e.g., open bottom arch culverts, clear span bridges). Construction of the northernmost subdivision access road from Green Valley Road would remove and reconstruct an existing embankment and access road that currently ponds water upstream. An adjacent downstream pond would be reconstructed to pass Green Spring Creek flows. The downstream pond also currently supports an embankment that would be removed as part of the

channel reconstruction. Both embankments are proposed for modification due to concerns of overtopping during an existing 100-year storm event, a potential public safety issue. As proposed, the Project would pass Green Spring Creek flows through the property in a way that enhances public safety and reestablishes access to the site across the upper embankment.

Off-site improvements in the southwestern off-site area are proximate to Allegheny Creek but can be designed to avoid all direct impacts to the creek.

This document evaluates the Study Area and makes recommendations for potential biological resource impacts based on the preliminary grading and drainage plans for the on-site portion of the Study Area and estimates of impact area limits for the off-site infrastructure areas (**Attachment A**).

# 2.0 REGULATORY SETTING

This section describes federal, state and local laws and policies that are relevant to this BRA.

## 2.1 Federal Regulations

### *2.1.1 Federal Endangered Species Act*

The Federal Endangered Species Act (FESA) of 1973 protects species that are federally listed as endangered or threatened with extinction. FESA prohibits the unauthorized "take" of listed species. Take includes harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such activities. Harm includes significant modifications or degradations of habitats that may cause death or injury to protected species by impairing their behavioral patterns. Harassment includes disruption of normal behavior patterns that may result in injury to or mortality of protected species. Civil or criminal penalties can be levied against persons convicted of unauthorized "take."

### *2.1.2 Clean Water Act, Section 404*

Section 404 of the Federal Clean Water Act requires that a Department of the Army permit be issued prior to the discharge of dredged or fill material into waters of the United States, including some wetlands. The U.S. Army Corps of Engineers (USACE) administers this program, with oversight from the U. S. Environmental Protection Agency. As of the date of this document, waters of the United States (waters of the U.S.) are defined as follows (40 CFR 120.2):

1. Waters which are:
    i. Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
    ii. The territorial seas; or
    iii. Interstate waters;

2. Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under item (5) below;
3. Tributaries of waters identified in items (1) or (2) above that are relatively permanent, standing or continuously flowing bodies of water;
4. Wetlands adjacent to the following waters:
    i. Waters identified in item (1) of this section; or
    ii. Relatively permanent, standing or continuously flowing bodies of water identified in items (2) or (3) above and with a continuous surface connection to those waters;
5. Intrastate lakes and ponds not identified in paragraphs (1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in items (1) or (3) above.

Under the current definition of waters of the U.S., "adjacent" means *having a continuous surface connection*.

Waters subject to regulation under Section 404 are referred to as "jurisdictional waters".

### *2.1.3 Migratory Bird Treaty Act*

The Migratory Bird Treaty Act (MBTA) prohibits the take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase or barter, any native migratory bird, their eggs, parts, and nests, except as authorized under a valid permit (50 CFR 21.11). Likewise, Section 3513 of the California Fish & Game Code prohibits the "take or possession" of any migratory non-game bird identified under the MBTA. Therefore, activities that may result in the injury or mortality of native migratory birds, including eggs and nestlings, would be prohibited under the MBTA.

## 2.2 State Regulations

### *2.2.1 California Environmental Quality Act*

The California Environmental Quality Act (CEQA) requires evaluations of project effects on biological resources. Determining the significance of those effects is guided by Appendix G of the CEQA guidelines. These evaluations must consider direct effects on a biological resource within the project site itself, indirect effects on adjacent resources, and cumulative effects within a larger area or region. Effects can be locally important but not significant according to CEQA if they would not substantially affect the regional population of the biological resource. Significant adverse impacts on biological resources would include the following:

- Substantial adverse effects on any species identified as candidate, sensitive, or special-status in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife (CDFW) or the U.S. Fish and Wildlife Service (USFWS) (these effects could be either direct or via habitat modification);
- Substantial adverse impacts to species designated by the California Department of Fish and Game (2009) as Species of Special Concern;

- Substantial adverse effects on riparian habitat or other sensitive habitat identified in local or regional plans, policies, or regulations or by CDFW and USFWS;
- Substantial adverse effects on federally protected wetlands defined under Section 404 of the Clean Water Act (these effects include direct removal, filling, or hydrologic interruption of marshes, vernal pools, coastal wetlands, or other wetland types);
- Substantial interference with movements of native resident or migratory fish or wildlife species population, or with use of native wildlife nursery sites;
- Conflicts with local policies or ordinances protecting biological resources (e.g., tree preservation policies); and
- Conflict with provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan.

### *2.2.2 State Endangered Species Act*

With limited exceptions, the California Endangered Species Act (CESA) of 1984 protects state-designated endangered and threatened species in a way similar to FESA. For projects on private property (i.e., that for which a state agency is not a lead agency), CESA enables CDFW to authorize take of a listed species that is incidental to carrying out an otherwise lawful project that has been approved under CEQA (Fish and Game Code Section 2081).

### *2.2.3 Native Plant Protection Act*

The Native Plant Protection Act (NPPA), enacted in 1977, allows the Fish and Game Commission to designate plants as rare or endangered. There are 64 species, subspecies, and varieties of plants that are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants but includes some exceptions for agricultural and nursery operations; emergencies; and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations.

### *2.2.4 Clean Water Act, Section 401*

Section 401 of the Clean Water Act requires any applicant for a 404 permit in support of activities that may result in any discharge into waters of the United States to obtain a water quality certification with the Regional Water Quality Control Board (RWQCB). This program is meant to protect these waters and wetlands by ensuring that waste discharged into them meets state water quality standards. Because the water quality certification program is triggered by the need for a Section 404 permit (and both programs are a part of the Clean Water Act), the definition of waters of the United States under Section 401 is the same as that used by the USACE under Section 404.

### *2.2.5 California Water Code, Porter-Cologne Water Quality Control Act*

The Porter-Cologne Water Quality Control Act (Porter-Cologne), from Division 7 of the California Water Code, requires any person discharging waste or proposing to discharge waste that could affect the quality

of waters of the state to file a report of waste discharge (RWD) with the RWQCB. The RWQCB can waive the filing of a report, but once a report is filed, the RWQCB must either waive or adopt water discharge requirements (WDRs). "Waters of the state" are defined as any surface water or groundwater, including saline waters, within the boundaries of the state.

### *2.2.6 California Fish and Game Code, Section 1600 – Streambed and Lake Alteration*

The CDFW is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the Fish and Game Code, Section 1602, requires notification to CDFW of any proposed activity that may substantially modify a river, stream, or lake. Notification is required by any person, business, state or local government agency, or public utility that proposes an activity that will:

- substantially divert or obstruct the natural flow of any river, stream or lake;
- substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or
- deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

For the purposes of Section 1602, rivers, streams and lakes must flow at least intermittently through a bed or channel. If notification is required and CDFW believes the proposed activity is likely to result in adverse harm to the natural environment, it will require that the parties enter into a Lake or Streambed Alteration Agreement (LSAA).

### *2.2.7 California Fish and Game Code, Section 3503.5 - Raptor Nests*

Section 3503.5 of the Fish and Game Code makes it unlawful to take, possess, or destroy hawks or owls, unless permitted to do so, or to destroy the nest or eggs of any hawk or owl.

### *2.2.8 California Fish and Game Code, Section 3511, 4700, 5050, and 5515 – Fully Protected Species*

California Fish and Game Code identifies "fully protected species" in sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish). The state initially identified fully protected species in the 1960s to identify and provide additional protection to animals that were rare or faced possible extinction. Subsequent passage of the California Endangered Species Act has offered additional protection to some fully protected species.

Fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research, relocation of the bird species for the protection of livestock, or if they are a covered species whose conservation and management is provided for in a Natural Community Conservation Plan (NCCP).

## 2.3 Local Regulations

### *2.3.1 El Dorado County Zoning Ordinance, Protection of Wetlands and Sensitive Riparian Habitat*

The El Dorado County Zoning Ordinance Site Planning and Project Design Standards for setback requirements (Section 130.30.050) establishes standards for avoidance and minimization of impacts to wetlands and sensitive riparian habitat. This section of the Ordinance applies to discretionary projects adjacent to perennial streams, intermittent streams, wetlands, or any sensitive riparian habitat within the County. The Ordinance requires new development to avoid or minimize impacts to these habitat types. If the habitats cannot be avoided, the County requires an assessment that establishes appropriate buffers to reduce impacts to a less than significant level and mitigation consistent with state or federal permit requirements. Storm drain and irrigation outflow structures are permitted as long as they are approved by the County as part of the development process.

### *2.3.2 El Dorado County Zoning Ordinance, Oak Resources Conservation*

Chapter 130.39 of the El Dorado County Zoning Ordinance requires mitigation for impacts to native oak trees in all portions of unincorporated El Dorado County below 4,000 feet in elevation. This Chapter requires documentation of all oak woodlands, individual native oak trees, and heritage native oak trees (collectively, Oak Resources) on a site if any oak impacts are proposed on that site. Furthermore, an Oak Resources Technical Report must be prepared as stipulated in the Chapter. Mitigation for impacts to Oak Resources is typically accomplished through payment of an in-lieu fee to the Oak Woodland Conservation Fund.

### *2.3.3 El Dorado County Ecological Preserves Ordinance*

Chapter 130.71 of the El Dorado County Code requires mitigation or payment of a fee in-lieu of mitigation for development of any property within Mitigation Areas 0, 1, or 2. This fee is commonly referred to as the Rare Plant Mitigation fee and is to be paid in full upon issuance of a building permit for all new developments within the County. "Mitigation Area 0" means lands within the Gabbro Soils Rare Plant Ecological Preserve, as shown on maps on file in the Department, adopted by Ordinance 4500. "Mitigation Area 1" means lands outside of Mitigation Area 0 but within the area described as the "rare soils study area" on the same map, and "Mitigation Area 2" means lands outside of Mitigation Areas 0 and 1 but within the El Dorado Irrigation District service area, excluding those lots served by wells. The Study Area is located at least partially within Mitigation Area 1, which assigns a current mitigation fee of $885 per dwelling unit equivalent (El Dorado County 2022).

# 3.0 METHODOLOGY

## 3.1 Literature Review

A list of special-status species with potential to occur within the Study Area was developed by conducting a query of the following databases:

- California Natural Diversity Database (CNDDB) (CNDDB 2022 and 2024) queries of the "Clarksville, California" USGS 7.5-minute quadrangle and the eight surrounding quadrangles (searched using the nine quadrangle names) (**Figure 2** and **Attachment B**);
- USFWS Information for Planning and Conservation (IPaC) (USFWS 2022) query for the Study Area (**Attachment C**);
- California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (CNPS 2022 and 2024) query of the "Clarksville, California" USGS topo quadrangle, and the eight surrounding quadrangles (**Attachment D**);
- Verified records from Bumble Bee Watch (BBW 2024);
- Queries of the Western Monarch Milkweed Mapper (WMMM 2024) and Western Monarch Overwintering Site Viewer (Xerxes Society 2024) databases;
- Research grade observations from iNaturalist (iNaturalist 2024);
- Western Bat Working Group (WBWG) Species Matrix (WBWG 2022); and
- Cornell Laboratory of Ornithology's eBird database (Cornell Laboratory of Ornithology 2022 and 2024a).

In addition, any special-status species that are known to occur in the region, but that were not identified in any of the above database searches and/or were requested for consideration by the County were also analyzed for their potential to occur within the overall Study Area.

For the purposes of this Biological Resources Assessment, special-status species is defined as those species that are:

- listed as threatened or endangered, or proposed or candidates for listing by the USFWS or National Marine Fisheries Service;
- listed as threatened or endangered and candidates for listing by CDFW;
- identified as Fully Protected species or species of special concern by CDFW;
- identified as Medium or High priority species by the WBWG; and
- plant species considered to be rare, threatened, or endangered in California by the CNPS and CDFW [California Rare Plant Rank (CRPR) 1, 2, and 3]:
  - CRPR 1A: Plants presumed extinct.
  - CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere.
  - CRPR 2A: Plants extirpated in California, but common elsewhere.
  - CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere.
  - CRPR 3: Plants about which the CNPS needs more information – a review list.

### 3.2 Field Surveys

Madrone biologists Daria Snider and Matt Shaffer assessed the suitability of habitats on-site to support special-status species on 26 April, 7 and 24 May, and 9 June 2021 and 5 January 2024. The Study Area was comprehensively surveyed on foot by walking through all accessible areas. Vegetation communities were classified in accordance with *The Manual of California Vegetation, Second Edition* (Sawyer, Keeler-Wolf and

Evens 2009), and plant taxonomy was based on the nomenclature in the *Jepson eFlora* (Jepson Flora Project 2022). A list of all wildlife species observed during these field surveys is included as **Attachment E**. Additionally, Madrone biologists completed the following focused field surveys of the Study Area:

- Aquatic resources survey to review and update aquatic resources delineation previously verified by the USACE (**Attachment F**);
- California red-legged frog (*Rana draytonii*; CRLF) habitat assessment and surveys (**Attachment G**);
- Oak woodland assessment (**Attachment H**); and
- Special-status plant survey (**Attachment I**).

Aquatic resources on the Generations at Green Valley site were originally delineated by Gibson & Skordal, LLC (G&S) under the project name of Dixon Ranch. The USACE issued a Preliminary Jurisdictional Determination (PJD) for the G&S wetland delineation for Dixon Ranch on 26 August 2011. Since the time of the 2011 PJD, the proposed Project boundaries have changed, and the Project has been renamed. To review previously mapped areas and identify aquatic resources that may be present in areas not surveyed in 2011, Ms. Snider and Mr. Shaffer completed surveys of the current Study Area on 26 April, 7 and 24 May, and 9 June 2021 and 5 January 2024. Results of these surveys indicate that the previously mapped aquatic resource conditions were very consistent with current conditions. The revised aquatic resources delineation map is included in **Attachment F**. A request for a jurisdictional determination for the revised map has been submitted to the USACE.

Eric C. Hansen and Adam Johnson completed an evaluation of potential CTS habitat in the Study Area in April 2013 (Hansen 2013a). The evaluation was completed according to the October 2003 *Interim Guidance on Site Assessment and Field Surveys for Determining Presence or Negative Findings for the California Tiger Salamander* (USFWS and CDFG 2003). Mr. Hansen and Mr. Johnson also completed an evaluation of potential CRLF habitat in the Study Area in April 2013 (Hansen 2013b) and a protocol-level survey for CRLF in 2016 (Hansen 2016). The CRLF habitat assessment and surveys followed guidance provided in USFWS' *Revised Guidance on Site Assessments and Field Surveys for the California Red-Legged Frog* (USFWS 2005). No CRLF were identified during the 2016 surveys.

Hansen and Johnson's 2016 surveys were conducted in the summer only and did not include surveys that were timed (January through March) to observe egg masses. Since these surveys were conducted, the number of surveys required by the USFWS has increased, the Study Area has changed to add offsite utility improvements, and the results of these surveys are typically valid for only two years. Due to these reasons, Madrone biologist Dustin Brown conducted an updated habitat assessment and visual encounter surveys. Mr. Brown completed the updated CRLF habitat assessment of on-site and off-site habitats on 5 November 2021 and 19 January 2024, respectively . The site assessments also followed the USFWS guidance. Aquatic habitats and adjacent uplands were evaluated for their potential to support breeding, foraging, dispersal and refugia or aestivation habitat. During the site visit, all aquatic resources located within the Study Area were visited and assessed for the potential to provide suitable aquatic habitat for CRLF. Habitat assessments were completed for aquatic features that could potentially pond water through the spring and early summer, as well as adjacent uplands

surrounding such aquatic features. A survey report of Madrone's habitat assessment, which also includes consideration of off-site infrastructure areas, is included in **Attachment G**.

An Oak Woodlands Technical Report as required by the El Dorado County Zoning Ordinance and arborist report are being completed by California Tree and Landscape Consulting, Inc., and will be submitted to El Dorado County under separate cover. To inform this BRA, Ms. Snider mapped and assessed the extent of oak woodlands in the Study Area on 19 February 2021. Oak woodlands were mapped as defined in El Dorado County Oak Resources Management Plan (ORMP), dated September 2017. A copy of Ms. Snider's assessment report, which considers on- and off-site areas, is included as **Attachment H**.

Finally, Ms. Snider conducted protocol-level rare plant surveys of the on-site portion of the Study Area on 26 April, 7 May, and 9 June 2021 in accordance with the *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants* (USFWS 2000), the *Botanical Survey Guidelines of the California Native Plant Society* (CNPS 2001), and *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018). A report detailing the methods and results of the 2021 survey is included as **Attachment I**. A survey of off-site areas is scheduled for spring 2024; the results will be provided to the County upon completion of that survey.

## 4.0 EXISTING CONDITIONS

The Study Area is located on rolling terrain and consists primarily of annual brome grassland and blue oak woodlands. A narrow band of willow riparian scrub occurs along a seasonal wetland swale in the central portion of the main Study Area, and two large ponds (referred to as the upper and lower ponds in this document) occur in the northern portion along the intermittent Green Spring Creek. The ponds are currently separated by an embankment that acts as a dam for the upper pond; the lower pond is the result of another informal embankment downstream.

An historic homestead and associated outbuildings are located just south of the upper pond, and an active strawberry farm is located just north of the lower pond. A small patch of Valley needlegrass grassland is located on the embankment for the lower pond. The heavily trafficked Green Valley Road runs through the northern portion of the main Study Area; it is bordered by annual grasslands and oak woodland to the west, and serpentine chaparral to the east. An extensively manipulated terrace that has historically been used for the growing, harvesting, and sale of strawberries (and perhaps other crops) is located in the northeastern portion of the Study Area, south and west of Green Valley Road. However, this area is currently fallow, and the terrace area is primarily comprised of non-native annual grassland species and an unvegetated sandy/gravely parking area. To the west and south of this terrace, a relatively steep slope drops down to a poorly maintained dirt road. A very disturbed/open chaparral community occupies much of this slope, and a number of rock outcrops are located just above the dirt road. In addition to the ponds and intermittent Green Spring Creek, a number of seasonal wetland swales, seeps, small depressional wetlands, and ephemeral drainages are scattered throughout the Study Area. Elevations within the on-site portion of the Study Area range from 820 feet to 1,240 feet above mean sea level.

Off-site infrastructure study areas range between a low of about 670 feet above mean sea level for the northwestern off-site area to about 1,050 for off-site area adjacent to the main portion of the Study Area. The northwestern off-site area is primarily comprised of a gravel access road with adjacent annual brome grassland. The northern portion of this area includes a reach of the intermittent Alleghany Creek and its adjacent Fremont cottonwood riparian woodland. An area of residential landscaping also occurs within this off-site area. The northwestern off-site area includes a lift station site on the north/west side of Loch Way. This urban area supports a pump station, a small area of interior live oak woodland just east of the lift station, and a short reach of Alleghany Creek with associated Fremont cottonwood riparian woodland on the eastern side.

The southwestern off-site area is almost entirely comprised of a transmission line corridor. An asphalt recreational trail with broad decomposed granite shoulders winds through the center, and the remainder is largely comprised of an annual brome grassland. The exception is an area of interior live oak woodland in the southern portion of this off-site area.

## 4.1 Soils

The Natural Resources Conservation Service has mapped five soil mapping units within the Study Area, as shown on **Figure 3** (NRCS 2024):

- (AwD) Auburn silt loam, 2 to 30% slopes;
- (AxD) Auburn very rocky silt loam, 2 to 30% slopes;
- (AxE)Auburn very rocky silt loam, 30 to 50% slopes;
- (PrD) Placer diggings; and
- (SaF) Serpentine rock land

The on-site portion of the Study Area is dominated by AwD and AxD, with SaF occurring along Green Valley Road in the eastern portion of the on-site area. The offsite infrastructure areas support all types except for SaF. Unit SaF is comprised of serpentine rocks, and units AwD, AxD, and AxE are comprised of material weathered from metabasic or metasedimentary rock such as amphibolite schist, greenstone schist, or diabase.

## 4.2 Aquatic Resources

The Study Area supports seven types of aquatic features: seeps, seasonal wetland swales, seasonal wetlands, ponds, intermittent drainage (Green Spring Creek and Allegheny Creek), ephemeral drainage, and roadside ditch (**Figure 4 and Table 1**). A description of aquatic resources mapped within the Study Area follows.

**Table 1. Aquatic Resources in the Study Area**

| Resource Type | Amount in On-Site Study Area (acres) | Amount in Off-Site Study Areas (acres) | Total in Study Area (acres) |
|---|---|---|---|
| *Wetlands* | | | |
| Seep | 0.39 | – | 0.39 |
| Seasonal Wetland Swale | 2.14 | 0.02 | 2.16 |
| Seasonal Wetland | 0.03 | – | 0.03 |
| ***Wetlands Total*** | ***2.56*** | ***0.02*** | ***2.58*** |
| *Other Waters* | | | |
| Ephemeral Drainage | 0.24 | 0.01 | 0.25 |
| Intermittent Drainage | 0.81 | 0.08 | 0.89 |
| Pond | 3.80 | – | 3.80 |
| Roadside Ditch | 0.023 | – | 0.02 |
| ***Other Waters Total*** | ***4.88*** | ***0.09*** | ***4.96*** |
| **GRAND TOTAL** | **7.44** | **0.11** | **7.54** |

*Summation errors may occur due to rounding.*

#### *4.2.1 Seeps*

Four seeps totaling approximately 0.39 acre occur within the on-site portion of the Study Area. Plant species found in these areas include Baltic rush (*Juncus balticus*), Mediterranean barley, perennial rye (*Festuca perennis*), and spiny-fruited buttercup (*Ranunculus muricatus*).

#### *4.2.2 Seasonal Wetland Swales*

About 2.16 acres of seasonal wetland swales are present in the Study Area. These features are dominated by perennial ryegrass, Mediterranean barley, curly dock (*Rumex crispus*), tall flat sedge (*Cyperus eragrostis*), and spiny-fruited buttercup.

#### *4.2.3 Seasonal Wetlands*

Two depressional seasonal wetlands totaling 0.03 acre are present within the Study Area. At the time these features were mapped, vegetation within was sparse and consisted of slender popcorn flower (*Plagiobothrys stipitatus* ssp. *micranthus*), curly dock, Mediterranean barley, and perennial rye.

#### *4.2.4 Ponds*

Two ponds totaling about 3.80 acre occur within the Study Area, behind historic impoundments of Green Spring Creek. The lower (downstream) pond appears to be perennial, and the upper (upstream) pond is intermittent in many years. In most years, both appear to fill during the winter. The western pond is

unvegetated in the center due to the depth of the water. The fringes of the western pond and much of the eastern pond support common tule (*Schoenoplectus acutus* var. *occidentalis*), cattails (*Typha* species), creeping spike rush (*Eleocharis macrostachya*), water pepper (*Persicaria hydropiper*), and seep spring monkey flower (*Erythranthe guttata*), among many others.

### *4.2.5 Intermittent Drainages*

The Study Area includes portions of two intermittent drainages, Green Spring Creek, which flows through the northeastern portion of the on-site Study Area, and Allegheny Creek, which flows into and out of the southwestern off-site area along the EID easement. Green Spring Creek is primarily unvegetated due to the scouring effects of water. Vegetation that occurs along the fringes of Green Spring Creek is similar to that in the on-site ponds. The area of Green Spring Creek within the Study Area is about 0.81 acre.

Allegheny Creek is similar to Green Spring Creek. It is entirely unvegetated within the channel, has a small cobble/large gravel substrate, flows for much of the winter and into the spring, but is dry during the summer months. Adjacent vegetation is similar to that around the ponds. The area of Allegheny Creek within the Study Area is about 0.08 acre.

### *4.2.6 Ephemeral Drainages and Roadside Ditches*

A number of features within the Study Area experience ephemeral flow. These include seven ephemeral drainages (totaling about 0.25 acre) and 16 roadside ditches (totaling about 0.03 acre). These features only convey stormwater flow during and immediately following storm events. As such, they are primarily unvegetated due to the scouring effects of water. Any vegetation that does occur is typically comprised of ruderal upland plant species or species consistent with the surrounding upland vegetation community.

## 4.3 Terrestrial Vegetation Communities

The 314-acre Study Area supports nine vegetation communities. **Figure 5** and **Table 2** summarize the acreages of each community within the Study Area, and a description of each follows.

**Table 2. Vegetation Communities in the Study Area**

| Community Type | Amount in On-Site Area (acres) | Amount in Off-Site Areas (acres) | Total Amount in Study Area (acres) |
|---|---|---|---|
| Annual Brome Grassland | 167.3 | 7.3 | 174.6 |
| Armenian Blackberry Bramble | 0.6 | <0.1 | 0.6 |
| Eucalyptus Woodland | 0.1 | – | 0.1 |
| Oak Woodland[1] | 109.1 | 1.4 | 110.5 |
| Valley Needlegrass Grassland | <0.1 | – | <0.1 |
| Serpentine Chaparral | 0.8 | 1.0 | 1.8 |
| Fremont Cottonwood Riparian Woodland | – | 0.1 | 0.1 |
| Strawberry Field (agriculture) | 1.0 | – | 1.0 |

**Table 2. Vegetation Communities in the Study Area**

| Community Type | Amount in On-Site Area (acres) | Amount in Off-Site Areas (acres) | Total Amount in Study Area (acres) |
|---|---|---|---|
| Disturbed | 0.2 | 0.6 | 0.8 |
| Ruderal | 6.8 | 0.3 | 7.1 |
| Urban | 7.2 | 2.5 | 9.7 |

[1]Oak woodland acreages showing in this table do not include areas that overlap with aquatic resources. As such, the total amount of oak woodland may differ from the total identified in **Attachment H**.

### *4.3.1 Annual Brome Grassland*

The annual brome grasslands are dominated by rip-gut brome, medusahead, and soft chess. Other common species include yellow star-thistle (*Centaurea solstitialis*), Mediterranean barley (*Hordeum marinum*), and split-leaf geranium (*Geranium dissectum*). Some patches of the annual brome grassland support a diverse suite of native forbs, including hyacinth brodiaea (*Triteleia hyacinthina*), Valley sky lupine (*Lupinus nanus*), blue dicks (*Dichelostemma capitatum*), and field popcorn flower (*Plagiobothrys fulvus*).

### *4.3.2 Armenian Blackberry Bramble*

The Armenian blackberry (*Rubus armeniacus*) brambles are monocultures of Armenian blackberry, as this species forms dense patches that shade out all other vegetation. These brambles occur in the general vicinity of the ponds.

### *4.3.3 Eucalyptus Woodland*

A Eucalyptus woodland occurs along the south side of Green Valley Road in the northwestern portion of the Study Area. This woodland is a monoculture of blue gum (*Eucalyptus globulus*), as these trees produce chemicals that have allelopathic effects on other plant species.

### *4.3.4 Oak Woodland*

Oak woodlands are prevalent throughout the Study Area. These are comprised primarily of valley oak (*Quercus lobata*), interior live oak (*Quercus wislizenii*), and blue oak (*Quercus douglasii*). The understory is dominated by dogtail grass (*Cynosurus echinatus*) as well as plant species typical of the surrounding annual brome grasslands. A small component of the oak woodland along a seasonal wetland swale just south of Verde Valle Lane is riparian in nature, and supports arroyo willow (*Salix lasiolepis*), blue elderberry (*Sambucus nigra* ssp. *cerulea*) and Armenian blackberry in addition to the oaks.

### *4.3.5 Serpentine Chaparral*

The serpentine (or deer brush) chaparral is dominated by deer brush (*Ceanothus integerrimus var. integerrimus*), buck brush (*Ceanothus cuneatus var. cuneatus*), and grey pine (*Pinus sabiniana*). Other shrubs

occurring frequently in this community include toyon (Heteromeles arbutifolia), hoary coffeeberry (*Frangula californica subsp. tomentella*), and hollyleaf redberry (*Rhamnus ilicifolia*). Species occurring frequently in the understory include soft chess, false brome (*Branchypodium distachyon*), woolly sunflower (*Eriophyllum lanatum var. grandiflorum*), Ramm's madia (*Jensia rammii*), Q-tips (*Micropus californicus*), silverpuffs (*Uropappus lindleyi*), small-flower catchfly (*Silene gallica*), strigose lotus (*Acmispon strigosus*), and chaparral clarkia (*Clarkia affinis*).

#### *4.3.6 Fremont Cottonwood Riparian Woodland*

The Fremont cottonwood riparian woodland has a canopy dominated by Fremont cottonwood (*Populus fremontii*), black willow (*Salix gooddingii*) and arroyo willow. The understory is almost entirely comprised of Armenian blackberry.

#### *4.3.7 Strawberry Field*

A field in the northern portion of the Study Area is annually planted with commercial strawberry plants (*Fragaria* × *ananassa*) that produce strawberries sold at a stand on the north side of Green Valley Road. During the growing and harvest season, this field is heavily maintained, and almost entirely comprised of cultivated strawberry plants. During the fall and winter, the field is allowed to go fallow and various weedy non-native forbs colonize the area.

#### *4.3.8 Ruderal*

An area of ruderal vegetation is located in the northeast portion of the Study Area, along Green Valley Road. This area has been extensively manipulated by several uses within the past decade, including growing, harvesting, and sale of strawberries, blackberries, and potentially other crops; stockpiling of soil; and grading/redistribution of the soil piles. As a result, the area is primarily comprised of non-native annual grassland species with a few scattered shallow depressions that support mesic vegetation.

#### *4.3.9 Disturbed and Urban*

Disturbed and urban areas are comprised predominantly of impermeable surfaces (pavement, buildings, etc.), regularly maintained dirt roadways, or areas of maintained landscaping adjacent to residences. These areas generally do not support special-status species habitat, apart from foraging perches for raptors or possibly but unlikely, nesting in landscape trees.

#### *4.3.10 Valley Needlegrass Grassland*

A small patch (0.031 acre) of Valley needlegrass (*Nasella pulchra*) (also known as purple needlegrass) grassland is present on the dam of the western-most pond. In this area, Valley needlegrass comprises approximately 80% cover, and is interspersed with teasel (*Diplacus fullonium*), Klamath weed (*Hypericum*

*perforatum*), slender milkweed (*Asclepias fascicularis*), elegant brodiaea (*Brodiaea elegans*), and Baltic rush. Valley needlegrass grassland is considered by CDFW to be a "Sensitive Natural Community" (CDFW 2021).

## 5.0 RESULTS

**Table 3** provides a list of special-status species that were evaluated, including their listing status, habitat associations, and their potential to occur in the Study Area. The following criteria were used to determine each species' potential for occurrence on the site:

- Present: Species occurs on the site based on CNDDB records, and/or was observed on the site during field surveys.
- High: The site is within the known range of the species and suitable habitat exists.
- Moderate: The site is within the known range of the species and very limited suitable habitat exists.
- Low: The site is within the known range of the species and there is marginally suitable habitat, or the species was not observed during protocol-level surveys conducted on-site.
- Absent/No Habitat Present: The site does not contain suitable habitat for the species, the species was not observed during protocol-level surveys conducted on-site, or the site is outside the known range of the species.

**Figure 2** shows the general locations of CNDDB plant and wildlife occurrences within the nine quad area studied for the Project. Below is a discussion of all special-status plant and animal species with potential to occur in the Study Area.

**Table 3. Special-Status Species Potential for Occurrence within the Generations at Green Valley Study Area**

| ***Scientific Name*** **(Common Name)** | **Federal Status** | **State Status** | **Habitat Requirements** | **Potential for Occurrence** |
|---|---|---|---|---|
| **Plants** | | | | |
| *Allium jepsonii* Jepson's onion | -- | CRPR 1B.2 | Prefers cismontane woodland or lower montane coniferous forests associated with serpentine soils or volcanic slopes from 985 and 4,330 ft. | **Low.** Suitable habitat is present within the serpentine chaparral; however, this species was not found on-site during protocol-level surveys. Surveys of off-site infrastructure areas will be completed during the appropriate blooming period in 2024. |
| *Balsamorhiza macrolepis* Big-scale balsamroot | -- | CRPR 1B.2 | Occurs in chaparral, cismontane woodland, and valley and foothill grasslands between 150 and 5,100 ft. Often associated with serpentine soils. | **Low.** Suitable habitat is present throughout the Study Area; however, this species was not found on-site during protocol-level surveys. Surveys of off-site infrastructure areas will be completed during the appropriate blooming period in 2024. |
| *Calystegia stebbinsii* Stebbins' morning glory | FE | CE, CRPR 1B.1 | Openings in chaparral and cismontane woodland, often on Gabbro soils between 605 and 3,575 feet. | **Low.** Marginally suitable habitat is present due to the lack of gabbro soils; however, this species was not found on-site during protocol-level surveys. Surveys of off-site infrastructure areas will be completed during the appropriate blooming period in 2024. |
| *Carex xerophila* Chaparral sedge | -- | CRPR 1B.2 | Chaparral, cismontane woodland, and lower coniferous forests on Gabbro and serpentine soils between 1,445 and 2,525 feet. | **No Habitat Present.** The Study Area is outside of the elevational range of the species. |
| *Ceanothus roderickii* Pine Hill ceanothus | FE | CR, CRPR 1B.1 | Foothill chaparral and cismontane woodland associated with Gabbro soils of the Pine Hill formation between 805 and 3,575 feet. | **No Habitat Present.** Gabbro soils do not occur within the Study Area. |

**Table 3. Special-Status Species Potential for Occurrence within the Generations at Green Valley Study Area**

| ***Scientific Name*** **(Common Name)** | **Federal Status** | **State Status** | **Habitat Requirements** | **Potential for Occurrence** |
|---|---|---|---|---|
| *Chlorogalum grandiflorum* Red Hills soaproot | -- | CRPR 1B.2 | Chaparral, cismontane woodland, and lower montane coniferous forests associated with Gabbro or serpentine soils at elevations between 800 feet and 5,500 feet. | **Low.** Suitable habitat is present within the serpentine chaparral; however, this species was not found on-site during protocol-level surveys. Surveys of off-site infrastructure areas will be completed during the appropriate blooming period in 2024. |
| *Crocanthemum suffrutescens* Bisbee Peak rush rose | -- | CRPR 3.2 | Burned or disturbed areas in chaparral, often on Gabbro or Ione soils at elevations between 245 and 2,200 feet. | **Low.** Suitable habitat is present in the serpentine chaparral; however, this species was not found on-site during protocol-level surveys. Surveys of off-site infrastructure areas will be completed during the appropriate blooming period in 2024. |
| *Downingia pusilla* Dwarf downingia | -- | CRPR 2B.2 | Valley and foothill grassland (mesic) and vernal pools. | **Low.** Marginally Suitable habitat is present within the seasonal wetlands; however, this species was not found on-site during protocol-level surveys. Surveys of off-site infrastructure areas will be completed during the appropriate blooming period in 2024. |
| *Eryngium pinnatisectum* Tuolumne button-celery | -- | CRPR 1B.2 | Found in vernal pools and other mesic areas in cismontane woodland and lower montane coniferous forests between 230 and 3,000 ft. | **Low.** Suitable habitat is present within the seasonal wetlands, seeps, and seasonal wetland swales; however, this species was not found on-site during protocol-level surveys. Surveys of off-site infrastructure areas will be completed during the appropriate blooming period in 2024. |
| *Fremontodendron decumbens* Pine Hill flannelbush | FE | CR, CRPR 1B.2 | Foothill chaparral and cismontane woodland associated with rocky serpentine and Gabbro soils from 1,395 to 2,495 feet. | **No Habitat Present.** The Study Area is outside of the elevational range of the species. |

**Table 3. Special-Status Species Potential for Occurrence within the Generations at Green Valley Study Area**

| ***Scientific Name*** **(Common Name)** | **Federal Status** | **State Status** | **Habitat Requirements** | **Potential for Occurrence** |
|---|---|---|---|---|
| *Galium californicum* ssp. *sierrae* El Dorado bedstraw | FE | CR, CRPR 1B.2 | Foothill chaparral, cismontane woodland, and lower montane coniferous forest. Found on Gabbro soils between 330 and 1,920 feet. | **No Habitat Present.** Gabbro soils do not occur within the Study Area. |
| *Gratiola heterosepala* Boggs Lake hedge-hyssop | -- | CE, CRPR 1B.2 | Vernal pools and margins of lakes/ponds on clay soils (35' - 7,790'). | **No Habitat Present.** The seasonal wetlands within the Study Area do not have sufficient hydrology for this species. |
| *Juncus leiospermus* var. *ahartii* Ahart's dwarf rush | -- | CRPR 1B.2 | Edges of vernal pools and other seasonally ponded features from 100 to 750 ft. | **No Habitat Present.** The Study Area is outside of the elevational range of the species. |
| *Legenere limosa* Legenere | -- | CRPR 1B.1 | Vernal pools and other seasonally ponded features between 5 and 2,885 ft. | **No Habitat Present.** The seasonal wetlands within the Study Area do not have sufficient hydrology for this species. |
| *Navarretia myersii ssp. myersii* Pincushion navarretia | -- | CRPR 1B.1 | Vernal pools and other mesic areas between 65 and 1,085 ft. | **Low.** Marginally Suitable habitat is present; however, this species was not found on-site during protocol-level surveys. Surveys of off-site infrastructure areas will be completed during the appropriate blooming period in 2024. |
| *Orcuttia tenuis* Slender Orcutt grass | FT | CE, CRPR 1B.1 | Vernal pools and other seasonally ponded features between 115 and 5,775 ft. | **No Habitat Present.** The seasonal wetlands within the Study Area do not have sufficient hydrology for this species. |
| *Orcuttia viscida* Sacramento Orcutt grass | FE | CE, CRPR 1B.1 | Vernal pools between 100 and 330 ft. | **No Habitat Present.** The seasonal wetlands within the Study Area do not have sufficient hydrology for this species. |
| *Packera layneae* Layne's ragwort | FT | CR, CRPR 1B.2 | Foothill chaparral and cismontane woodland on serpentine or Gabbro soils between 655 and 3,560 ft. | **Low.** Suitable habitat is present within the serpentine chaparral; however, this species was not found on-site during protocol-level surveys. Surveys of off-site infrastructure areas will be completed during the appropriate blooming period in 2024. |

**Table 3. Special-Status Species Potential for Occurrence within the Generations at Green Valley Study Area**

| ***Scientific Name*** **(Common Name)** | **Federal Status** | **State Status** | **Habitat Requirements** | **Potential for Occurrence** |
|---|---|---|---|---|
| *Sagittaria sanfordii* Sanford's arrowhead | -- | CRPR 1B.2 | Emergent marsh habitat, typically associated with drainages, canals, or irrigation ditches from sea level to 2,135 feet. | **Low.** Suitable habitat is present around the edges of the ponds and Green Spring Creek; however, this species was not found on-site during protocol-level surveys. Surveys of off-site infrastructure areas will be completed during the appropriate blooming period in 2024. |
| *Wyethia reticulata* El Dorado County mule ears | -- | CRPR 1B.2 | Foothill chaparral, cismontane woodland, and lower montane coniferous forest. Found on Gabbro soils of the Pine Hill Formation from 605 to 2,065 feet. | **No Habitat Present.** Gabbro soils do not occur within the Study Area. |
| **Invertebrates** | | | | |
| *Bombus crotchii* Crotch bumble bee | | CC | Migratory species found throughout California spring through early fall, and along the immediate central and southern California coast year-round. Nectars on numerous floral resources, but is dependent upon milkweed (Asclepias species) plants as its exclusive larval host. Requires diverse floral resources with interspersed milkweed plants during the dispersal and breeding season (spring through fall). | **High.** The Study Area provides suitable nesting and foraging habitat for this species. |
| *Bombus occidentalis* Western bumble bee | | | Meadows and grasslands with blended floral resources are the appropriate habitat for this species. Historically known throughout the mountains and northern coast of California, but now largely confined to high elevation sites and a small handful of records on the northern California coast. | **No Habitat Present.** The Study Area is outside of the current range of this species (CDFW 2023a). There is one CNDDB record within the 9-quad area that includes the Study Area, recorded in 1976; this record, a collected specimen, is from an unknown specific location near Pilot Hill. There are no other verified, more recent records for El Dorado County or eastern Sacramento County in the Bumble Bee Watch database (BBW 2024). |

**Table 3. Special-Status Species Potential for Occurrence within the Generations at Green Valley Study Area**

| ***Scientific Name*** **(Common Name)** | **Federal Status** | **State Status** | **Habitat Requirements** | **Potential for Occurrence** |
|---|---|---|---|---|
| *Branchinecta lynchi* Vernal pool fairy shrimp | FT | -- | Vernal pools. | **No Habitat Present.** Seasonal wetlands do not have sufficient duration of inundation to support this species. |
| *Danaus plexippus* Monarch butterfly | FC | -- | Migratory species found throughout California spring through early fall, and along the immediate central and southern California coast year-round. Nectars on numerous floral resources but is dependent upon milkweed (*Asclepias* species) plants as their exclusive larval host. Requires diverse floral resources with interspersed milkweed plants during the dispersal and breeding season (spring through fall). | **High.** Milkweed plants in the Study Area provide habitat for the larval stage of this species. |
| *Desmocerus californicus dimorphus* Valley elderberry longhorn beetle | FT | -- | Dependent upon elderberry plant as primary host species. | **No Habitat Present.** The Study Area is outside of the range of the species. The USFWS 2023 5-year review for this species states that the species' range is below 500 feet in elevation, which is below the lowest elevation on-site.[1] Seven elderberry shrubs are present in the Study Area, with the lowest elevation shrub occurring at about 980 feet above mean sea level. |
| *Lepidurus packardi* Vernal pool tadpole shrimp | FE | -- | Vernal pools. | **No Habitat Present.** Seasonal wetlands do not have sufficient duration of inundation to support this species. |

[1] Although different ranges for VELB have been proposed in the past, the current presumed range relies only on verifiable sightings or specimens of adult VELB (USFWS 2019). Both subspecies of the elderberry longhorn beetle, the rare Desmocerus californicus dimorphus, and the common Desmocerus californicus californicus, have exit holes that are indistinguishable from one another (USFWS 2023), so exit holes alone are not a good indicator of presence. The CNDDB lists 18 presumed extant occurrences of VELB within the nine quad area studied for the Project, with six of those occurrences having observations of adults. None of the observations of adults are in El Dorado County, and the highest elevation of the 18 presumed extant observations is 640 feet. The two closest observations of adults are about 5.5 miles to the west/northwest of the northwestern off-site area (Occurrences #302 and #303), both of which are on the west shore of Folsom Reservoir (CNDDB 2024).

**Table 3. Special-Status Species Potential for Occurrence within the Generations at Green Valley Study Area**

| ***Scientific Name*** **(Common Name)** | **Federal Status** | **State Status** | **Habitat Requirements** | **Potential for Occurrence** |
|---|---|---|---|---|
| **Fish** | | | | |
| *Oncorhynchus mykiss irideus* Steelhead – Central Valley DPS (pop 11) | FT | -- | Sacramento and San Joaquin rivers and their tributaries. | **No Habitat Present.** No portion of the Sacramento, San Joaquin, or Cosumnes Rivers present in the Study Area. This species requires clear, oxygen-rich streams and rivers, which do not occur on-site. |
| *Hypomesus transpacificus* Delta smelt | FT | CE | Adults are found in the brackish open surface waters of the Delta and Suisun Bay. Though spawning has never been observed, it is believed to occur in tidally influenced sloughs and drainages on the freshwater side of the mixing zone. | **No Habitat Present.** No tidally influenced sloughs or drainages are present within the Study Area. |
| **Amphibians** | | | | |
| *Ambystoma californiense* California tiger salamander | FT | CT, CSC | Breeds in deep seasonal wetlands, vernal pools, and ponds or other deeply ponded wetlands and uses gopher holes and ground squirrel burrows in adjacent grasslands for upland refugia/foraging habitat. | **Absent/No Habitat Present.** The Study Area is outside of the range of this species. The current range of California tiger salamander does not extend into El Dorado County (CDFW 2020). A habitat assessment was completed in 2013 at the request of the landowner at the time (see **Attachment G**). The 2013 habitat assessment noted that the site is not within the documented range of the species. Madrone agrees with the findings of the 2013 habitat assessment. Because the site is outside of the current species range, there is no habitat in the Study Area. |

**Table 3. Special-Status Species Potential for Occurrence within the Generations at Green Valley Study Area**

| ***Scientific Name*** **(Common Name)** | **Federal Status** | **State Status** | **Habitat Requirements** | **Potential for Occurrence** |
|---|---|---|---|---|
| *Rana boylii*<br>Foothill yellow-legged frog – South Sierra DPS | FE | CE | Requires partially shaded, clear rocky streams at low to moderate elevations in areas of chaparral, open woodland, and forest. | **Low.** A foothill yellow-legged frog population was recently (2023) documented in Sweetwater Creek approximately 1.5 miles north of the Study Area. Both Green Spring Creek and Allegheny Creek are ephemeral and do not provide ideal habitat for the species. Green Spring Creek is too heavily grazed and Allegheny Creek contains too dense of a riparian canopy to provide acceptable habitat for foothill yellow-legged frog. However, the species may use the two creeks to travel between suitable habitats in the area. |
| *Rana draytonii*<br>California red-legged frog | FT | CSC | Breeds in permanent to semi-permanent aquatic habitats including lakes, ponds, marshes, creeks, and other drainages. | **Absent.** The two onsite ponds and a seep within the onsite Study Area represent potential breeding habitat for CRLF. Protocol-level surveys conducted in 2023 did not detect the species. These surveys are valid for two years. The species may use Green Spring Creek and Allegheny Creek as migration corridors. |
| *Spea hammondi*<br>Western spadefoot | PT | CSC | Breeds in vernal pools, seasonal wetlands and associated swales. Forages and aestivates in adjacent grasslands. | **No Habitat Present.** Seasonal wetlands do not have sufficient duration of inundation to support this species. |
| **Reptiles** | | | | |
| *Actinemys marmorata*<br>Northwestern pond turtle | PT | CSC | Ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat. | **Present.** The two ponds within the Study Area are inhabited by northwestern pond turtles. Northwestern pond turtles may also use Green Spring Creek to travel between habitats. |
| *Phrynosoma blainvillii*<br>Blainville's (Coast) horned lizard | -- | CSC | Diverse habitat associations, but normally a low land species associated with sandy scrub habitat. | **Low.** Roadsides, openings in the deer brush chaparral, and the ruderal habitat |

**Table 3. Special-Status Species Potential for Occurrence within the Generations at Green Valley Study Area**

| *Scientific Name* (Common Name) | Federal Status | State Status | Habitat Requirements | Potential for Occurrence |
|---|---|---|---|---|
| | | | | in the northeastern portion of the Study Area provide marginal habitat for this species. |
| *Thamnophis gigas* Giant garter snake | FT | CT | Occurs in freshwater ditches, sloughs, and marshes in the Central Valley. Almost extirpated from the southern parts of its range. | **No Habitat Present.** The Study Area is outside of the range of the species. |
| **Birds** | | | | |
| *Accipiter atricapillus* American goshawk | -- | CSC | Nests in mature and old-growth forest stands that include a broad range of conifer and conifer-hardwood types above approximately 2,000 feet in elevation. | **No Habitat Present.** The Study Area is outside of the elevational range for this species. |
| *Agelaius tricolor* Tricolored blackbird | -- | CT, CSC | Colonial nester in dense vegetation, such as cattails, bulrush, or blackberries associated with marsh habitats. | **High.** The cattails and tules in the ponds and Armenian blackberry brambles represent potential nesting habitat, and surrounding grasslands provide potential foraging habitat for this species. |
| *Ammodramus savannarum* Grasshopper sparrow | -- | CSC | Typically found in expansive short to middle-height, moderately open grasslands with scattered shrubs or other song perches. | **Low.** The annual brome grassland is marginally suitable habitat for this species due to the absence of scattered shrubs. |
| *Aquila chrysaetos* Golden eagle | -- | CFP | Forages in open areas including grasslands, savannahs, deserts, and early successional stages of shrub and forest communities. Nests in large trees and cliffs. | **High.** Large trees on-site provide suitable nesting habitat, and the annual brome grassland is suitable foraging habitat. |
| *Athene cunicularia* Burrowing owl | -- | CSC | Nests in abandoned ground squirrel burrows associated with open grassland habitats. | **Low.** The Study Area is outside of the breeding range of this species, but it could use the site for wintering . |
| *Buteo swainsoni* Swainson's hawk | -- | CT | Nests in large trees, preferably in riparian areas. Forages in fields, cropland, irrigated pasture, and grassland near large riparian corridors. | **Low.** The Study Area is outside of the species' generally accepted range. Although it could fly through the area, the species is not expected to nest or forage on-site with much frequency. |

**Table 3. Special-Status Species Potential for Occurrence within the Generations at Green Valley Study Area**

| ***Scientific Name*** **(Common Name)** | **Federal Status** | **State Status** | **Habitat Requirements** | **Potential for Occurrence** |
|---|---|---|---|---|
| *Coccyzus americanus occidentalis* Western yellow-billed cuckoo | FT | CE | Inhabits extensive deciduous riparian thickets or forests with dense, low-level or understory foliage, adjacent to slow-moving waterways, backwaters, or seeps. | **No Habitat Present.** The Study Area does not support deciduous riparian areas with dense, low-level or understory foliage, adjacent to slow-moving waterways. |
| *Elanus leucurus* White-tailed kite | -- | CFP | Open grasslands, fields, and meadows are used for foraging. Isolated trees in close proximity to foraging habitat are used for perching and nesting. | **High.** Trees on-site provide suitable nesting habitat, and the annual brome grassland is suitable foraging habitat. |
| *Haliaeetus leucocephalus* Bald eagle | FD | CE | Nest in large trees within 1 mile of lakes, rivers, or larger streams. | **High.** The ponds provide suitable foraging habitat; however, the species is unlikely to nest on-site due to small size of available foraging habitat. |
| *Icteria virens* Yellow-breasted chat | -- | CSC | Occupies early-successional riparian habitats with well-developed shrub layer and open canopy along streams, creeks, sloughs, and rivers. | **Low.** Riparian habitat within the Study Area provides marginal habitat for this species. |
| *Lanius ludovicianus* Loggerhead shrike | -- | CSC | Occurs in open areas with sparse trees, shrubs, and other perches. | **Low.** Study Area provides suitable perching and foraging habitat, but there are few records for the species in the vicinity of the Project site (Cornell Lab 2024a). |
| *Laterallus jamaicensis coturniculus* California black rail | -- | CT, CFP | Nests and forages in salt, brackish, and fresh marshes with abundant vegetative cover. | **Moderate.** Marsh vegetation around the edges of the ponds provide marginally suitable habitat for the species due to the small patch sizes. |
| *Progne subis* Purple martin | -- | CSC | Nests in tall bridges and overpasses near water and open areas. | **No Habitat Present.** No tall bridges or overpasses are present within the Study Area. |
| *Riparia riparia* Bank swallow | -- | CT | Colonial nester preferring vertical cliffs and banks with fine textured/sandy soils associated with riparian zones along streams, rivers, and lakes. | **No Habitat Present.** Suitable vertical cliffs and banks do not occur within the Study Area. |
| *Setophaga petechia* Yellow warbler | -- | CSC | Occupies riparian vegetation proximate to water along streams and in wet meadows. This species no | **Moderate.** Species could migrate through the Study Area and take cover in |

**Table 3. Special-Status Species Potential for Occurrence within the Generations at Green Valley Study Area**

| *Scientific Name* (Common Name) | Federal Status | State Status | Habitat Requirements | Potential for Occurrence |
|---|---|---|---|---|
| | | | longer breeds in the central valley but occurs as a common migrant in the fall and winter months. | vegetation along Green Spring Creek and Allegheny Creek and the on-site ponds. |
| **Mammals** | | | | |
| *Antrozous pallidus*<br>Pallid bat | -- | CSC, WBWG H | Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., basal hollows of coast redwoods and giant sequoias, bole cavities of oaks, exfoliating Ponderosa pine and valley oak bark, deciduous trees in riparian areas, and fruit trees in orchards), and various human structures such as bridges (especially wooden and concrete girder designs), barns, porches, bat boxes, and human-occupied as well as vacant buildings. | **High.** Suitable roosting habitat for this species is present in tree hollows and under exfoliating bark on trees throughout the site. |
| *Bassariscus astutus raptor*<br>Northern California ringtail | -- | FP | Occurs in riparian habitats, forest brush, and shrublands in association with rocky areas. Ringtail is known to is known to nest in rock recesses, hollow trees, logs, snags, and abandoned burrows. | **No Habitat Present.** Proximity of riparian habitats in the off-site areas to existing urban development do not provide suitable habitat for this species, |
| *Corynorhinus townsendii townsendii*<br>Townsend's big-eared bat | -- | CC, WBWG H | Roosts in caves and cave analogues, such as abandoned mines, buildings, bridges, rock crevices and large basal hollows of coast redwoods and giant sequoias. Extremely sensitive to human disturbance. | **Moderate.** The abandoned buildings just south of the pond represent marginally suitable roosting habitat for this species. |
| *Lasionycteris noctivagans*<br>Silver-haired bat | -- | WBWG M | Roosts in abandoned woodpecker holes, under bark, and occasionally in rock crevices. It forages in open wooded areas near water features. | **High.** Suitable roosting habitat for this species is present in tree hollows and under exfoliating bark on trees throughout the site. |
| *Lasiurus blossevillii*<br>Western red bat | -- | CSC, WBWG H | Require large leaf trees such as cottonwoods, willows, and fruit/nut trees for daytime roosts. Often associated with wooded habitats that are protected from above and open below. Often found in association with riparian corridors. Require open space for foraging. | **High.** Trees scattered throughout the site are suitable roosting habitat for this species. |

**Table 3. Special-Status Species Potential for Occurrence within the Generations at Green Valley Study Area**

| ***Scientific Name*** **(Common Name)** | **Federal Status** | **State Status** | **Habitat Requirements** | **Potential for Occurrence** |
|---|---|---|---|---|
| *Lasiurus cinereus* Hoary bat | -- | WBWG M | Roosts primarily in foliage of both coniferous and deciduous trees at the edges of clearings (WBWG 2022). | **High.** Trees scattered throughout the site are suitable roosting habitat for this species. |
| *Pekania pennanti* Fisher | -- | CSC | Uses cavities, snags, logs and rocky areas for cover and denning. Needs large areas of mature, dense forest. | **No Habitat Present.** Study Area lacks mature, dense forest habitat. |
| *Taxidea taxus* American badger | -- | CSC | Drier open stages of most shrub, forest, and herbaceous habitats with friable soils. | **Low.** The annual brome grasslands and oak woodlands provide marginally suitable habitat for American badger due to the surrounding residential development and limited occurrences in the vicinity. |

Status Codes:

CC – CDFW Candidate for Listing
CE - CDFW Endangered
CFP - CDFW Fully Protected
CRPR - California Rare Plant Rank
CSC - CDFW Species of Concern
CT - CDFW Threatened
FC - Federal Candidate for Listing
FD - Federally Delisted
FT - Federally Threatened
PT – Proposed for Federal Listing as Threatened
WBWG M - Western Bat Working Group Medium Threat Rank
WBWG H - Western Bat Working Group High Threat Rank

## 5.1 Plants

### *5.1.1 Jepson's Onion*

Jepson's onion (*Allium jepsonii*) is not listed under the federal or California Endangered Species Acts; however, it is designated as a CRPR List 1B.2 plant. Jepson's onion is found in chaparral, cismontane woodland, and lower montane coniferous forests on serpentine or volcanic soils. It is a bulbiferous perennial, and it blooms from April through August at elevations from 980 feet to 4,330 feet (CNPS 2022).

The chaparral on serpentine soils in the northeastern portion of the Study Area provides suitable habitat for this species. This species was not observed during the 2021 protocol-level special status plant survey, which was conducted in May and June when this species would have been in bloom. However, special-status plant surveys of off-site infrastructure areas have not been completed. There is a low likelihood that this species is present within the Study Area.

### *5.1.2 Big-Scale Balsamroot*

Big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*) is not federally or state-listed, but it is classified as a CRPR List 1B.2 plant. It is a perennial herbaceous species that occurs in chaparral, cismontane woodland and valley and foothill grasslands between 295 and 4,600 feet. Big-scale balsamroot blooms from March through June and may be found on serpentine soils, though it is known to grow on other soil types as well (CNPS 2022).

Upland communities throughout the Study Area provide suitable habitat for this species. This species was not observed during the 2021 protocol-level special status plant survey, which was conducted in April, May, and June when this species would have been in bloom. However, special-status plant surveys of off-site infrastructure areas have not been completed. There is a low likelihood that this species is present within the Study Area.

### *5.1.3 Stebbins' Morning Glory*

Stebbins' morning glory (*Calystegia stebbinsii*) is a federal and state-listed endangered species and is classified as a CRPR 1B.1 plant. It is a perennial rhizomatous herb that is found in openings in chaparral and cismontane woodland on serpentine or gabbroic soils. Stebbins' morning glory blooms from April to July at elevations from 600 feet to 3,600 feet (CNPS 2022).

The chaparral on serpentine soils in the northeastern portion of the Study Area provides suitable habitat for this species. This species was not observed during the 2021 protocol-level special status plant survey, which was conducted in May and June when this species would have been in bloom. However, special-status plant surveys of off-site infrastructure areas have not been completed. There is a low likelihood that this species is present within the Study Area.

### *5.1.4 Chaparral Sedge*

Chaparral sedge (*Carex xerophila*) is not federally or state-listed, but it is classified as a CRPR List 1B.2 plant. It is a perennial herb that is found in chaparral, cismontane woodland, and lower coniferous forests on serpentine or gabbroic soils. Chaparral sedge blooms from March through June at elevations from 1,500 feet to 2,500 feet (CNPS 2022).

The chaparral on serpentine soils in the northeastern portion of the Study Area provides suitable habitat for this species. This species was not observed during the 2021 protocol-level special status plant survey, which was conducted in May and June when this species would have been identifiable. However, special-status plant surveys of off-site infrastructure areas have not been completed. There is a low likelihood that this species is present within the Study Area.

### *5.1.5 Pine Hill Ceanothus*

Pine Hill ceanothus (*Ceanothus roderickii*) is listed as endangered under the federal Endangered Species Act, as a California rare species, and is classified as a CRPR List 1B.1 plant. Pine Hill ceanothus is a prostrate, low-growing shrub that is known primarily from Pine Hill in El Dorado County. The species occurs in chaparral and cismontane woodland with Gabbro or serpentine soils between 805 and 3,575 feet. It blooms from April to June.

The chaparral on serpentine soils in the northeastern portion of the Study Area provides marginally suitable habitat for this species, as it is largely tightly restricted to the Pine Hill Formation. This species was not observed during the 2021 protocol-level special status plant survey, which was conducted in May when this species was observed in bloom at another site in the vicinity. However, special-status plant surveys of off-site infrastructure areas have not been completed. There is a low likelihood that this species is present within the Study Area.

### *5.1.6 Red Hills Soaproot*

Red Hills soaproot (*Chlorogalum grandiflorum*) is not federally or state-listed, but it is classified as a CRPR List 1B.2 plant. Red Hills soaproot occurs in chaparral, cismontane woodland, and lower montane coniferous forest on gabbro, serpentine, and other soils. This perennial blooms from May to June and is found from approximately 800 feet to 3,300 feet (CNPS 2022).

Upland communities throughout the Study Area provides suitable habitat for this species. This species was not observed during the 2021 protocol-level special status plant survey, which was conducted in June when this species was observed in bloom on other nearby sites. However, special-status plant surveys of off-site infrastructure areas have not been completed. There is a low likelihood that this species is present within the Study Area.

### *5.1.7 Bisbee Peak Rush Rose*

Bisbee Peak rush-rose (*Crocanthemum suffrutescens*) is not federally or state-listed, but it is classified as a CRPR List 3.2 plant. Bisbee Peak rush-rose occurs in burned or otherwise disturbed areas in chaparral often on Ione Formation or Gabbro soils, but also on other soils. This perennial blooms from April through August and is found from approximately 245 feet to 2,200 feet (CNPS 2022).

The chaparral on serpentine soils in the northeastern portion of the Study Area provides suitable habitat for this species. This species was not observed during the 2021 protocol-level special status plant survey, which was conducted in June when this species was observed in bloom on other nearby sites. However, special-status plant surveys of off-site infrastructure areas have not been completed. There is a low likelihood that this species is present within the Study Area.

### *5.1.8 Dwarf Downingia*

Dwarf downingia (*Downingia pusilla*) is not federally or state-listed, but it is classified as a CRPR List 1B.2 plant. It is a diminutive annual herb that is strongly associated with vernal pools and other seasonally inundated features at elevations ranging from sea level to approximately 1,500 feet. Dwarf downingia is typically associated with areas that experience a moderate degree of disturbance, and it blooms from March to May (CNPS 2022).

The seasonal wetlands and seasonal wetland swales within the Study Area represent marginal habitat for this species. This species was not observed during the 2021 special-status plant survey of the Study Area, which was conducted in April, when this species was observed in bloom at other nearby sites. However, special-status plant surveys of off-site infrastructure areas have not been completed. There is a low likelihood that this species is present within the Study Area.

### *5.1.9 Tuolumne Button-Celery*

Tuolumne button-celery (*Eryngium pinnatisectum*) is not federally- or state-listed, but it is classified as a CRPR List 1B.2 plant. This species occurs in mesic areas in cismontane woodlands and coniferous forests, as well as vernal pools. Tuolumne button-celery blooms from May through August and is found from approximately 300 feet to 3,000 feet (CNPS 2022).

Seasonal wetlands, seasonal wetland swales, seeps, and intermittent drainages throughout the Study Area provide suitable habitat for this species. This species was not observed during the 2021 protocol-level special status plant survey, which was conducted when the species would have been identifiable at least to genus. However, special-status plant surveys of off-site infrastructure areas have not been completed. There is a low likelihood that this species is present within the Study Area.

### *5.1.10 Pine Hill Flannelbush*

Pine Hill flannelbush (*Fremontodendron decumbens*) is listed as endangered under the federal Endangered Species Act, as a California rare species, and is classified as a CRPR List 1B.2 plant. Pine Hill flannelbush is a sprawling, low-growing shrub that is known from Pine Hill in El Dorado County and potentially from an isolated population in Nevada County. The species favors foothill chaparral and cismontane woodland with rocky Gabbro or serpentine soils between 1,395 and 2,495 feet. It blooms from April to June.

The chaparral on serpentine soils in the northeastern portion of the Study Area provides marginally-suitable habitat for this species, as it is largely tightly restricted to the Pine Hill Formation. This species was not observed during the 2021 protocol-level special status plant survey, which was conducted in late May when this species would have been in bloom. However, special-status plant surveys of off-site infrastructure areas have not been completed. There is a low likelihood that this species is present within the Study Area.

### *5.1.11 Pincushion Navarretia*

Pincushion navarretia (*Navarretia myersii* ssp. *myersii*) is not federally or state-listed, but it is classified as a CRPR List 1B.1 plant. This annual herb is found in vernal pools and other mesic areas in annual grasslands on clay soils. Pincushion navarretia is found at elevations between approximately 65 feet and 1,100 feet and blooms from April through May (CNPS 2022).

The seasonal wetlands within the Study Area represent marginally suitable habitat for this species. This species was not observed during the 2021 special-status plant survey of the Study Area, which was conducted in April and May, when this species would have been in bloom. However, special-status plant surveys of off-site infrastructure areas have not been completed. There is a low likelihood that this species is present within the Study Area.

### *5.1.12 Layne's Ragwort*

Layne's ragwort (*Packera layneae*) is a federally threatened species, a state rare species, and is classified as a CRPR List 1B.2 plant. It is a perennial herb found in rocky areas in chaparral and cismontane woodlands with serpentine or Gabbroic soils. Layne's ragwort blooms from April through August at elevations from 650 feet to 3,560 feet (CNPS 2022).

The chaparral on serpentine soils in the northeastern portion of the Study Area provides suitable habitat for this species. This species was not observed during the 2021 protocol-level special status plant survey, which was conducted in late May when this species was in bloom at other sites in the vicinity. However, special-status plant surveys of off-site infrastructure areas have not been completed. There is a low likelihood that this species is present within the Study Area.

### *5.1.13 Sanford's Arrowhead*

Sanford's arrowhead (*Sagittaria sanfordii*) is not federally or state-listed, but it is classified as a CRPR List 1B.2 plant. It generally occurs in shallow freshwater habitats associated with drainages, canals, and larger ditches that sustain inundation and/or slow-moving water into early summer. It is a perennial rhizomatous emergent species that blooms from May to October at elevations from sea level to 2,130 feet (CNPS 2022).

The ponds and Green Spring Creek within the Study Area provide suitable habitat for this species. This species was not observed during the 2021 protocol-level special status plant survey, which was conducted in June when this species was in bloom at other sites in the region. However, special-status plant surveys of off-site infrastructure areas have not been completed. There is a low likelihood that this species is present within the Study Area.

## 5.2 Sensitive Natural Communities

### *5.2.1 Valley Needlegrass Grassland*

A 0.031-acre patch of Valley needlegrass (*Nasella pulchra*) grassland is present on the dam of the western-most (lower) pond. In this area, Valley needlegrass comprises approximately 80% cover, and is interspersed with teasel (*Diplacus fullonium*), Klamath weed (*Hypericum perforatum*), slender milkweed (*Asclepias fascicularis*), elegant brodiaea (*Brodiaea elegans*), and Baltic rush. CDFW considers Valley needlegrass grassland a "Sensitive Natural Community" (CDFW 2021).

## 5.3 Invertebrates

### *5.3.1 Crotch Bumble Bee*

Crotch bumble bee (*Bombus crotchii*) is not federally listed but is a candidate for listing under CESA. This species has a limited distribution in southwestern North America. This species occurs primarily in California, including the Mediterranean region, Pacific Coast, West Desert, Great Valley, and adjacent foothills through most of southwestern California. It also occurs in Mexico (Baja California and Baja California Sur) (Williams et al. 2014) and has been documented in southwest Nevada, near the California border. This species was historically common in the Central Valley of California, but now appears to be absent from most of it, especially in the center of its historic range (Williams et al. 2014; Richardson et al. 2014). In California, *B. crotchii* inhabits open grasslands and scrub habitats.

All bumble bees have three basic requirements: suitable nesting sites for the colonies, availability of nectar and pollen from floral resources throughout the duration of the entirety of the colony period (spring, summer, and fall), and suitable overwintering sites for the queens. Nests are often located underground in abandoned holes made by ground squirrels, mice, and rats or occasionally abandoned bird nests (Osborne et al. 2008). Some species nest on the surface of the ground (in tufts of grass) or in empty cavities. Bumble bees that nest aboveground may require undisturbed areas with nesting resources such as grass and hay

to protect nests. Furthermore, areas with woody cover, or other sheltered areas provide bumble bees sites to build their nests (e.g., downed wood, rock walls, brush piles, etc.).

Bumble bees depend on the availability of habitats with a rich supply of floral resources that bloom continuously during the entirety of the colony's life. The queen collects nectar and pollen from flowers to support the production of her eggs, which are fertilized by sperm she has stored from mating the previous fall. As generalist foragers, bumble bees do not depend on any one flower type. They generally prefer flowers that are purple, blue or yellow; they are essentially blind to the color red. The plant families most commonly associated with Crotch bumble bee observations in California include Apocynaceae, Asteraceae, Boraginaceae, Fabaceae, and Lamiaceae (Xerces Society et al. 2018). Very little is known about hibernacula, or overwintering sites utilized by most bumble bees. Generally, bumble bees overwinter in soft, disturbed soil (Goulson 2010), under leaf litter or other debris (Williams et al. 2014), in abandoned holes made by fossorial mammals or occasionally in abandoned bird nests (Osborne at al 2008). Some species nest on the surface of the ground (in grassy tussocks) or in empty cavities (hollow logs, dead trees, under rocks, etc.). Queens most likely overwinter in small cavities just below or on the ground surface.

A bumble bee (*Bombus* sp.) was observed during the aquatic resource delineation of the site but was not identified to species level. The Study Area provides nesting and foraging habitat for Crotch bumble bee. The CNDDB lists one occurrence of this species within the nine quad area studied for this Project (Occurrence #290); a male Crotch bumble bee was observed in a vernal pool grassland area 16 miles to the southwest of the Study Area, just northeast of the Douglas Road/Sunrise Boulevard intersection in Sacramento County (CNDDB 2024). The Bumble Bee Watch database does not show any occurrences near the Study Area; the nearest recorded Crotch bumble bee sighting in the Bumble Bee Watch database is about 28 miles southwest of the Study Area in the Pocket area of Sacramento (BBW 2024). The iNaturalist database lists one research grade record near Pilot Hill, about 9 miles north of the Study Area, recorded in 2022 (iNaturalist 2024).

### *5.3.2 Monarch Butterfly*

The monarch butterfly (*Danaus plexippus*) is a FESA candidate species. It is a large conspicuous species that occurs in North, Central, and South America; Australia; New Zealand; islands of the Pacific and Caribbean, and elsewhere (Malcolm and Zalucki 1993 in USFWS 2020). During the breeding season, monarchs lay their eggs on their obligate milkweed host plant (*Asclepias* spp.), and larvae emerge after two to five days (Zalucki 1982 in USFWS 2020). Larvae develop over a period of 9 to 18 days, feeding on the milkweed and then pupate into chrysalis before eclosing 6 to 14 days later as an adult butterfly (USFWS 2020). Multiple generations of monarchs are produced during the breeding season, with most adult butterflies living approximately two to five weeks (USFWS 2020).

In California, monarchs continue to occupy and breed in areas near their overwintering groves along the California coast into northern Baja California throughout the year, and also disperse over multiple generations to occupy and breed throughout the state in the spring through fall (USFWS 2020). Migrating monarchs in western North America tend to occur more frequently near water sources such as rivers, creeks,

roadside ditches, and irrigated gardens (Morris et al. 2015 in USFWS 2020). Adult monarch butterflies require a diversity of blooming nectar resources during breeding and migration (spring through fall). Monarchs also need milkweed (for both oviposition and larval feeding) embedded within this diverse nectaring habitat.

This species was not observed in the Study Area during Project-related surveys. No CNDDB occurrences of this species are documented within the nine quad area studied for this Project (CNDDB 2024). In addition to milkweed present in the Study Area, the Western Monarch Milkweed Mapper (WMMM) shows occurrences of milkweed about two miles north of the on-site portion of the Study Area (most recently recorded in 2011; WMMM 2024). The WMMM also shows a record of a monarch about two-and-a-half miles south of the southwestern off-site area, south of U.S. 50 (recorded in 2017), and one occurrence of breeding monarch about two-and-a-half miles east of the southwestern off-site area (recorded in 2022) (WMMM 2024). The site is not proximate to any overwintering areas for the species (Xerxes Society 2024). The Study Area provides limited suitable egg-laying habitat for this species.

## 5.4 Amphibians

### *5.4.1 California Red-Legged Frog*

California red-legged frog (*Rana draytonii*) is listed as threatened under the federal Endangered Species Act and is a CDFW Species of Special Concern. Habitat for this species is characterized by riparian vegetation associated with slow-moving water that is relatively deep (>0.7 meters). Emergent and edge vegetation requirements are highly variable and include willow (*Salix* sp.), cattails, and bulrushes (*Schoenoplectus* spp.) providing appropriate habitat (Jennings and Hayes 1994). Adults can be found in both ephemeral and perennial streams and ponds, though stable populations require permanent freshwater (salinity ≤4.5%) water sources for the larval life stage (Jennings and Hayes 1994). Riparian vegetation and mammal burrows near water sources also provide refuge to estivating adults (USFWS 1996). Adults may utilize mammal burrows, desiccation cracks on pond bottoms, or dense vegetation and debris piles when aquatic breeding habitat dries (Alvarez 2004). The Study Area is not within federally identified critical habitat for CRLF and there are no documented occurrences within three miles of the Study Area.

California red-legged frog was not observed during previous 2013 habitat assessment and 2016 surveys of the on-site area completed by Eric Hansen and Adam Johnson or during the 2023 surveys completed by Madrone. Potential aquatic breeding habitat is present within the Study Area in the two on-site ponds and within a seep (Seep-4 as shown in **Attachment F**). Green Spring Creek and Allegheny Creek within the Study Area represent suitable dispersal habitat for this species. The 2023 surveys of the ponds recorded predatory species such as American bullfrog (*Lithobates catesbeianus*), black bass (*Micropterus* sp.), bluegill (*Lepomis macrochirus*), Sacramento sucker (*Catostomus occidentalis*), red swamp crayfish (*Procambarus clarkia*), great egret (*Ardea alba*), great blue heron (*Ardea herodias*), racoon (*Procyon lotor*), north American river otter (*Lontra canadensis*), and valley garter snake (*Thamnophis sirtalis fitchi*). The presence of these species greatly reduces or eliminates the potential for CRLF to be present (Madrone 2024). Mosquitofish (*Gambusia affinis*), which may feed on CRLF tadpoles, and American bullfrog were both recorded during the 26 April 2021 site

assessment by Ms. Snider and Mr. Shaffer; American bullfrog was also recorded during the 7 May 2021 site assessment.

Protocol surveys for CRLF surveys conducted in 2016 and 2023 did not detect the species. It is presumed that CRLF is absent from the site.

### *5.4.2 Foothill Yellow-Legged Frog*

The foothill yellow-legged frog (FYLF) – South Sierra distinct population segment (DPS) (*Rana boylii*) is federally and state listed as endangered. This species is a small- to medium-sized stream-dwelling frog with fully webbed feet and rough pebbly skin. Coloring of the species is highly variable but is usually gray, brown, olive, or reddish with brown-black flecking and mottling, which often matches the local substrate (CFGC 2020). The FYLF is a stream obligate species.

The historical range of FYLF extended from the Willamette River drainage in Oregon south through the Sierra Nevada Mountains to the Transverse Range, and down along the California Coast Range to at least the Upper San Gabriel River in Los Angeles County, California. The current distribution of FYLF generally follows the historical distribution of the species (FR Vol 86, No 246, pages 73914-73945). In its recent status determination for this species, the California Fish and Game Commission classified FYLF as having six unique, genetic clades (CFGC 2020). The six separate genetic clades are identified as the North Coast, North Feather, North Sierra, South Sierra, Central Coast, and South Coast. The Study Area is within the South Sierra clade, also known as the South Sierra DPS.

Both Green Spring Creek and Allegheny Creek flows are too irregular to provide suitable breeding habitat for FYLF. Additionally, Green Spring Creek within the Study Area is too heavily grazed to provide suitable habitat for FYLF, and Allegheny Creek contains a very dense canopy cover that the species does not prefer. The CNDDB lists three presumed extant records for this species within the nine quad area studied for the Project, the closest of which is about 1.3 miles north of the on-site portion of the Study Area in an intact riparian corridor along Sweetwater Creek, recorded in 2023 (Occurrence #273; CNDDB 2024). There is a low potential for FYLF to occasionally utilize Green Spring Creek and Allegheny Creek as dispersal corridors between suitable habitat.

## 5.5 Reptiles

### *5.5.1 Northwestern Pond Turtle*

The northwestern pond turtle (*Actinemys marmorata*) is proposed for listing as threatened under FESA and is a CDFW Species of Special Concern. Favored habitats include streams, large rivers and canals with slow-moving water, aquatic vegetation, and open basking sites. Although this species must live near water, it can tolerate drought by burrowing into the muddy beds of dried drainages. This species feeds mainly on invertebrates such as insects and worms, but will also consume small fish, frogs, mammals and some plants.

Northwestern pond turtle predators include raccoons, coyotes, raptors, weasels, large fish, and bullfrogs. This species breeds from mid to late spring in adjacent open grasslands or sandy banks.

This species is present in both of the ponds within the Study Area. Several northwestern pond turtles were observed using the ponds during the 2023 California red-legged frog surveys. It is also presumed that northwestern pond turtles use Green Spring Creek as a migration corridor and may nest within the uplands adjacent to the on-site ponds. Off-site areas do not support suitable habitat for this species. The CNDDB lists 14 presumed extant occurrences within the nine quad area studied for the Project. The closest observations are about two miles to the west of the Study Area at a golf course, last observed in 2017 (Occurrence #1359), and about two miles to the south, in a drainage along Silva Valley Parkway, observed in 2012 (Occurrence #1646 (CNDDB 2024).

### *5.5.2 Coast (Blainville's) Horned Lizard*

Coast (Blainville's) horned lizard (*Phrynosoma blainvillii*) is not federally or state-listed but is a CDFW Species of Special Concern. This species is a relatively large (to 105 mm in snout-vent length), dorsoventrally flattened, rounded lizard found historically from Redding, California, to Baja, Mexico (Jennings and Hayes 1994). This diurnal species can occur within a variety of habitats including scrubland, annual brome grassland, valley-foothill woodlands and coniferous forests, though it is most common along lowland desert sandy washes and chaparral (Stebbins and McGinnis 2012). In the Coast Ranges, it occurs from Sonoma County south into Baja California (CDFG 1988). It occurs from sea level to 8,000 feet above MSL and an isolated population occurs in Siskiyou County (Stebbins and McGinnis 2012).

Blainville's horned lizard is found in open microhabitats such as sandy washes with scattered shrubs or firebreaks in chaparral, where they forage for ants, small beetles and other insects (Jennings and Hayes 1994). Horned lizards (*Phrynosoma*) are native ant specialists and daily activities are centered on above-ground activity patterns of ants, with lizards active generally in mornings and later in the afternoon in the summer.

This species was not observed in the Study Area during Project-related surveys. Roadsides and openings in the deer brush chaparral and ruderal habitat in the northeastern portion of the Study Area provide marginal habitat for this species due to the level of disturbance. The CNDDB lists four presumed extant occurrences of Blainville's horned lizard within the nine quad area studied for the Project. The nearest observation (Occurrence #596) occurred in 1995 in gabbroic chaparral habitat approximately 2.7 miles east of the on-site portion of the Study Area on Pine Hill (CNDDB 2024). There is a low likelihood that this species may occur in the Study Area.

## 5.6 Birds

### *5.6.1 Tricolored Blackbird*

Tricolored blackbird (*Agelaius tricolor*), which is currently in decline throughout the state, is listed as threatened under the CESA. Historically, colonies were established in freshwater marshes dominated by cattails (*Typha* spp.) and bulrushes (*Scirpus* or *Schoenoplectus* spp.). More recently, this species has utilized non-native mustards (*Brassica* spp.), blackberries (*Rubus* spp.), thistles (*Circium* spp.), and mallows (*Malva* spp.) as nesting substrate. Since the 1980s, the largest colonies have been observed in the San Joaquin Valley in cultivated fields of triticale, which is a hybrid of wheat and rye often grown as livestock fodder. This current trend of nesting in active agricultural fields has further imperiled the species as nestlings typically have not fledged by the time the triticale is harvested.

This species was not observed in the Study Area during Project-related surveys. The CNDDB lists 21 presumed extant occurrences of tricolored blackbird nesting sites within the nine quad area studied for the Project. The closest observation, recorded in 1990 is about two miles to the west of the southwestern off-site area, adjacent to the Natomas Ditch in Folsom (CNDDB 2024). The cattails and tules in the ponds and Armenian blackberry brambles represent potential nesting habitat for tricolored blackbird and surrounding grasslands provide potential foraging habitat. There is a high likelihood that this species may occur in the Study Area.

### *5.6.2 Grasshopper Sparrow*

The grasshopper sparrow (*Ammodramus savannarum*) is not listed pursuant to either the California or federal Endangered Species Acts, but it is designated as a species of special concern by CDFW. The grasshopper sparrow is an uncommon and local summer resident and breeder along the western edge of the Sierra Nevada and most coastal counties south to Baja California (Small 1994, Vickery 1996). This species generally inhabits moderately open grasslands and prairies with patchy bare ground and scattered shrubs (Vickery 1996). Grasshopper sparrows are more likely to occupy large tracts of habitat than small fragments (Vickery 1996). Breeding generally occurs from early May through August.

This species was not observed in the Study Area during Project-related surveys. The CNDDB shows one occurrence of this species within the nine quad area studied for the Project. This observation occurred in 2007, in the Deer Creek Hills unit of the Prairie City State Vehicle Recreation Area, which is about 10 miles southwest of the southwestern portion of the off-site area (Occurrence #15; CNDDB 2024). Cornell Lab's eBird database shows several other recent observations in the same general area (Cornell Lab 2024a). The annual brome grassland is marginally suitable habitat for this species due to the absence of scattered shrubs. The probability that this species could occur in the Study Area is low.

### *5.6.3 Golden Eagle*

The golden eagle (*Aquila chrysaetos*) is not federally or state listed but is a CDFW fully protected species and is protected under the federal Bald and Golden Eagle Protection Act. It is a very large solitary raptor that forages in large, expansive open grasslands and savannahs, and nests on cliff ledges or in large, lone trees in rolling to mountainous terrain (Shuford and Gardali 2008). Though its natural densities are generally believed to be low, it once was relatively common to the open areas of California.

This species was not observed in the Study Area during Project-related surveys. The CNDDB lists two occurrences of golden eagle nest sites within the nine quad area studied for the Project, both in oak woodland/gray pine habitat east of Empire Ranch Road (CNDDB 2024). Both sites are within about two miles of the southwestern off-site area, with one recorded in 2015 as a potential alternative nest site for a pair (Occurrence # 322) and one recorded in 2014 as an active nest (Occurrence #321), Cornell Lab's eBird lists several recent unverified occurrences in the same area (Cornell Lab 2024a). Large trees in the Study Area provide suitable nesting habitat, and the annual brome grassland is suitable foraging habitat. There is a high likelihood that this species may occur in the Study Area.

### *5.6.4 Burrowing Owl*

Burrowing owl (*Athene cunicularia*) is not listed pursuant to either the California or federal Endangered Species Acts but is designated as a Species of Special Concern by the CDFW. This species typically inhabits dry open rolling hills, grasslands, desert floors, and open bare ground with gullies and arroyos. It typically uses burrows created by fossorial mammals, most notably the California ground squirrel, but may also use man-made structures such as culverts; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement. The breeding season extends from February 1 through August 31 (CBOC 1993, CDFW 2012).

This species was not observed in the Study Area during Project-related surveys, but annual grassland in the western part of the Study Area provides marginally suitable wintering habitat for burrowing owl. The CNDDB lists eight occurrences of this species within the nine quad area studied for this Project, the nearest being about four miles to the west/southwest of the southwestern off-site area, just south of where Highway 50 crosses the Sacramento/El Dorado County line (Occurrence #1166; CNDDB 2024). eBird lists several observations in eastern Sacramento County and far western El Dorado County, mostly along and west of Latrobe Road (Cornell Lab 2024a). Because this species is known to occasionally utilize annual grassland areas at similar foothill elevations for wintering, there is a low likelihood that it could occur within the Study Area.

### *5.6.5 Swainson's Hawk*

Swainson's hawk (*Buteo swainsoni*) is a raptor species that is not federally listed but is listed as threatened by CDFW. Breeding pairs typically nest in tall trees associated with riparian corridors, and forage in grassland, irrigated pasture, and cropland with a high density of rodents (Shuford and Gardali 2008). The

Central Valley populations breed and nest in the late spring through early summer before migrating to Central and South America for the winter (Shuford and Gardali 2008).

This species was not observed in the Study Area during Project-related surveys. The CNDDB lists eight occurrences of Swainson's hawk within the nine quad area studied for the Project. The closest occurrence is about 4.5 miles west of the southwestern off-site area, but was recorded in 1962 (Occurrence #2662) in an area that includes downtown Folsom. The closest recent occurrence from 2012 (Occurrence #2234), is about 8.2 miles southwest of the southwestern off-site area, near the Prairie City State Vehicle Recreation Area. Cornell Lab's eBird shows a few unverified records near Bass Lake in El Dorado Hills and in Cameron Park (Cornell Lab 2024a). The Study Area is outside of the species' generally accepted range. Although it could fly through the area, the species is not expected to nest or forage in the Study Area with much frequency. The probability that this species could occur in the Study Area is low.

### *5.6.6 White-Tailed Kite*

White-tailed kite (*Elanus leucurus*) is not federally or state listed but is a CDFW fully protected species. This species is a yearlong resident in the Central Valley and is primarily found in or near foraging areas such as open grasslands, meadows, farmlands, savannahs, and emergent wetlands (Shuford and Gardali 2008). White-tailed kites typically nest from March through June in trees within riparian, oak woodland, and savannah habitats of the Central Valley and Coast Range (Shuford and Gardali 2008).

This species was not observed in the Study Area during Project-related surveys. The CNDDB lists 10 occurrences of this species within the nine quad area studied for the Project. The nearest record, recorded in 2008 (Occurrence #149), is about 1.5 miles west of the southwestern off-site area (CNDDB 2024). Cornell Lab's eBird lists numerous recent unverified occurrences within five miles, including one in a residential area about 0.5 mile west of the on-site Study Area and one about 0.4 mile east of the southwestern off-site area (Cornell Lab 2024a). Trees within the Study Area provide suitable nesting habitat, and the annual brome grassland is suitable foraging habitat. There is a high likelihood that this species may occur in the Study Area.

### *5.6.7 Bald Eagle*

Bald eagle (*Haliaeetus leucocephalus*) is listed as endangered under the CESA and is fully protected under state law and the federal Bald and Golden Eagle Protection Act. This species is not found in the high Sierra Nevada Mountains and breeds in northern California north of the Study Area. It requires large bodies of water or free flowing rivers with abundant fish and adjacent snags or other perches. It nests in large, live trees with open branchwork, most frequently in stands with less than 40% canopy and near a permanent water source (Zeiner et al. 1998 as updated).

This species was not observed in the Study Area during Project-related surveys. The CNDDB lists four occurrences of this species within the nine quad area studied for the Project, including historic use of an area near Bass Lake north of U.S. Highway 50 (Occurrence #130, about 1.7 miles southeast of the on-site

area) and near Folsom Lake to the west (Occurrence #358, about 2.2 miles west of the northwestern off-site area). Cornell Lab's eBird also shows several records in the vicinity of Bass Lake and Cameron Park Lake (Cornell Lab 2024a). Ponds within the Study Area provide suitable foraging habitat, but the species is unlikely to nest on-site due to small size of available foraging habitat. There is a high likelihood that this species may occur in the Study Area.

### *5.6.8 Yellow-Breasted Chat*

Yellow-breasted chat (*Icteria virens auricollis*) is not federally or state listed but is designated as a Species of Special Concern by the CDFW. This small migratory songbird is fairly widespread but typically uncommon across much of the U.S. and Mexico during its breeding season; this species nests throughout western North America and winters from southern Baja California and south Texas south to as far as Costa Rica (Shuford and Gardali 2008, Cornell Lab 2024a). Yellow-breasted chats live in thickets and other dense, regrowing areas such as bramble bushes, clearcuts, powerline corridors, and shrubs along streams (Cornell Lab 2024b).

### *5.6.9 Loggerhead Shrike*

Loggerhead shrike (*Lanius ludovicianus*) is not federally or state listed but is designated as a Species of Special Concern by the CDFW. This predatory songbird typically hunts insects and small vertebrates including amphibians, reptiles, mammals, and birds. This species will cache excess food for later consumption by skewering prey on thorns, barbed wire, or other sharp objects. Loggerhead shrikes nest in small trees and shrubs in woodland and savanna vegetation communities, and forage in open habitats throughout California (Shuford and Gardali 2008). Their nesting season ranges from March through June.

This species was not observed in the Study Area during Project-related surveys. The CNDDB does not list any occurrences of loggerhead shrike in the nine quad area studied for this Project, but the eBird database shows an unverified 1984 occurrence near Cameron Park Lake to the west of the Study Area and an unverified 2022 observation to the south, near the intersection of Cambridge Road and Country Club Drive (Cornell Lab 2024a). Oak woodlands and grasslands in the Study Area provide suitable perching and foraging habitat for this species. Given the lack of recent observations in the general area, there is a low likelihood that this species may occur in the Study Area.

### *5.6.10 California Black Rail*

California black rail (*Laterallus jamaicensis* ssp. *coturniculus*) is listed as threatened under the CESA. This secretive bird is a yearlong resident of saline, brackish, and fresh emergent wetlands including those in the Sacramento-San Joaquin Delta (Zeiner et al. 1988 as updated). California black rails nest close to the ground in or along marsh edges, in areas with saturated or shallowly flooded soils and dense vegetation, and usually hidden in marsh grass. They may also nest on damp ground, on mats of previous year's dead grasses (Terres 1980), or over very shallow water (Nature Serve 2022).

This species was not observed in the Study Area during Project-related surveys. The CNDDB lists two occurrences of this species within the nine quad area studied for the Project. The nearest observation (Occurrence #304), which is about 4.8 miles south of the on-site portion of the Study Area, was recorded in 2017 at a pond in a residential development south of US Highway 50 (CNDDB 2024). Marsh vegetation around the edges of the ponds provide marginally suitable habitat for the species due to the small patch sizes. This species has a moderate probability of occurring within the Study Area.

### *5.6.11 Yellow Warbler*

Yellow warbler (*Setophaga petechia*) is not federally or state listed but is designated as a Species of Special Concern by the CDFW. This species occupies riparian vegetation proximate to water along streams and in wet meadows. This species no longer breeds in the central valley but occurs as a common migrant in the fall and winter months (Shuford and Gardali 2008). Yellow warblers are one of the most numerous warblers in North America, but their populations have been slowly declining (Lowther et al. 2020).

This species was not observed in the Study Area during Project-related surveys. The CNDDB does not list any occurrences of this species within the nine quad area studied for this Project. The Cornell Lab eBird database lists numerous unconfirmed observations in the vicinity of the Study Area, including records in residential areas about two miles to the west and near Bass Lake (Cornell Lab 2024a). There is a moderate likelihood that this species may occur in the Study Area as a migrant.

## 5.7 Mammals

### *5.7.1 Pallid Bat*

Pallid bat (*Antrozous pallidus*) is not federally- or state-listed but is a CDFW Species of Special Concern and is classified by the WBWG as a high priority species. It favors roosting sites in crevices in rock outcrops, caves, abandoned mines, hollow trees, and human-made structures such as barns, attics, and sheds (WBWG 2022). Though pallid bats are gregarious, they tend to group in smaller colonies of 10 to 100 individuals. It is a nocturnal hunter and captures prey in flight, but unlike most American bats, the species has been observed foraging for flightless insects, which it seizes after landing (WBWG 2022).

This species was not observed in the Study Area during Project-related surveys. The CNDDB documents two occurrences of pallid bat within the nine quad area studied for the Project, but one record from 1941 (Occurrence #233) is for a specimen collected from a general area about 7.5 miles west of the Study Area (CNDDB 2024). A more recent (2017) occurrence was recorded in 2017 as part of a roost site under a bridge over the South Fork of the American River in Lotus (Occurrence #430), about 10.3 miles northeast of the on-site portion of the Study Area (CNDDB 2024). Suitable roosting habitat for pallid bat is present in tree hollows and under exfoliating bark on trees throughout the site. There is a high likelihood that this species may occur in the Study Area.

### *5.7.2 Townsend's Big-Eared Bat*

Townsend's big-eared bat (*Corynorhinus townsendii townsendii*) is not federally or state listed, but it is a California species of concern, and is classified by the WBWG as a High priority species. This species roosts primarily in caves and cave-like roosting habitat, including abandoned mines (WBWG 2018). Its habit of roosting pendant-like on open surfaces makes it readily detectable, and it can be the species most readily observed, when present (commonly in low numbers) in caves and abandoned mines throughout its range. It has also been reported to utilize buildings, bridges, rock crevices and hollow trees as roost sites. Forages in edge habitats along streams, and adjacent to and within a variety of wooded habitats (WBWG 2022).

This species was not observed in the Study Area during Project-related surveys. The CNDDB does not list any occurrences of Townsend's big-eared bat within the nine quad area studied for the Project. The abandoned buildings just south of the pond represent marginally suitable roosting habitat for this species. There is a moderate probability for Townsend's big-eared bat to occur within the Study Area.

### *5.7.3 Silver-Haired Bat*

Silver-haired bat (*Lasionycteris noctivagans*) is not federally or state listed but is classified by the WBWG as a Medium priority species. Primarily considered a coastal and montane forest species, the silver-haired bat occurs in more xeric environments during winter and seasonal migrations (WBWG 2022). It roosts in abandoned woodpecker holes, under bark, and occasionally in rock crevices. This insectivore's favored foraging sites include open wooded areas near water features (WBWG 2022).

This species was not observed in the Study Area during Project-related surveys. The CNDDB lists two occurrences of this species within the nine quad area studied for the Project. Both occurrences are for collected specimens, one from 1939 in an area that is now part of Folsom (Occurrence #64) and one from 1990 in the downtown Folsom area (CNDDB 2024). Suitable roosting habitat for silver-haired bat is present in tree hollows and under exfoliating bark on trees throughout the site. There is a high likelihood that this species may occur in the Study Area.

### *5.7.4 Western Red Bat*

Western red bat (*Lasiurus blossevillii*) is not federally or state listed but is considered a CDFW species of special concern and is classified by the WBWG as a High priority species. Western red bat is typically solitary, roosting primarily in the foliage of trees or shrubs (WBWG 2022). Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. There may be an association with intact riparian habitat (particularly willows, cottonwoods, and sycamores) (WBWG 2022).

This species was not observed in the Study Area during Project-related surveys. There are no CNDDB occurrences of this species within the nine quad area studied for the Project. iNaturalist shows one non-specific record for El Dorado County, a western red bat being rehabbed in 2023 (iNaturalist 2024). Trees

scattered throughout the site provide suitable roosting habitat for western red bat. There is a high likelihood that this species may occur in the Study Area.

### *5.7.5 Hoary Bat*

The hoary bat (*Lasiurus cinereus*) is not federally or state listed but is classified by the WBWG as a Medium priority species. It is considered to be one of the most widespread of all American bats with a range extending from Canada to central Chile and Argentina as well as Hawaii (WBWG 2022). Hoary bats prefer older large leaf trees, such as cottonwoods, willows, and fruit or nut trees for daytime roosts. This species is primarily crepuscular or nocturnal and requires open areas to hunt its main prey item, moths. The hoary bat is considered a forest/woodland species, and in California they are often associated with undisturbed riparian or stream corridors (WBWG 2022).

This species was not observed in the Study Area during Project-related surveys. The CNDDB does not list any occurrences of this species within the nine quad area studied for the Project. iNaturalist shows two records for hoary bat in El Dorado County, including one from near Fallen Leaf Lake in the Tahoe Basin from 2016 and a non-specific record of a hoary bat being rehabbed in 2023, and two records from far western Sacramento County (iNaturalist 2024). Trees scattered throughout the site provide suitable roosting habitat for hoary bat. There is a high likelihood that this species may occur in the Study Area.

### *5.7.6 American Badger*

The American badger (*Taxidea taxus*) is not federally or state listed but is designated as a species of special concern by CDFW. The species historically ranged throughout much of the state except in humid coastal forests. Badgers were once numerous in the Central Valley; however, populations now occur in low numbers in the surrounding peripheral parts of the valley and in the adjacent lowlands of eastern Monterey, San Benito, and San Luis Obispo counties (Williams 1986). Badgers occupy a variety of habitats, including grasslands and savannas. The principal requirements seem to be significant food supply, friable soils, and relatively open uncultivated ground (Williams 1986).

This species was not observed in the Study Area during Project-related surveys. The CNDDB lists one presumed extant occurrence of American badger within the nine quad area studied for the Project, a carcass that had been hit by a car in 2015, in oak savannah and oak woodland habitat along East Natoma Street near the Folsom Lake Crossing intersection in Folsom (Occurrence #489; CNDDB 2024). The annual brome grasslands and oak woodlands in the Study Area provide marginally suitable habitat for American badger due to the surrounding residential development. The probability that this species could occur in the Study Area is low.

# 6.0 POTENTIAL IMPACTS TO SENSITIVE BIOLOGICAL RESOURCES AND RECOMMENDED MITIGATION

As proposed, the Project would directly impact 164.1 acres of the 301-acre on-site Study Area (**Figure 6**) and up to 13.2 acres in the off-site portions of the Study Area. The following discussions summarize potential impacts to sensitive biological resources and make recommendations to minimize and mitigate those impacts.

## 6.1 Aquatic Resources

As of the time of this report, a jurisdictional determination for aquatic resources in the Study Area is pending with the USACE. As proposed, the Project could impact 2.30 acres of aquatic resources in the on-site portion of the Study Area, including the entirety of the lower pond, a portion of the upper pond, sections of roadside ditch, a portion of intermittent stream (Green Spring Creek) (**Figure 6**). Lower pond impacts would occur as a result of channel reconstruction. The post-construction condition for the lower pond would support an engineered channel for Green Spring Creek (see **Attachment A**). Upper pond impacts would occur as a result of reconstructing the embankment and installing a flow control structure; the reconstruction would slightly change the ordinary high water mark for the upper pond area and the post-construction condition would carry Green Spring Creek flow through the Project area. Ponding upstream of the flow control structure may occur during storm events, but under normal conditions, low flows would simply pass through the former upper pond area. Roadside ditch impacts would occur as a result of infrastructure installation and access road modifications. Finally, impacts to intermittent stream would occur with the construction of road crossings and/or upper embankment reconstruction. **Table 4** summarizes the expected aquatic resource impacts in the on-site portion of the Study Area.

**Table 4. Potential Aquatic Resource Impacts in the On-Site Portion of the Study Area**

| Resource Type | Amount in Study Area (acres) [1] | Potential Impacts (acres) | Avoided (acres) |
|---|---|---|---|
| *Wetlands* | | | |
| Seep | 0.39 | 0.00 | 0.39 |
| Seasonal Wetland Swale | 2.14 | 0.00 | 2.141 |
| Seasonal Wetland | 0.03 | 0.00 | 0.03 |
| ***Total Wetlands*** | ***2.56*** | ***0.00*** | ***2.56*** |
| *Other Waters* | | | |
| Ephemeral Drainage | 0.24 | 0.00 | 0.24 |
| Intermittent Drainage | 0.81 | 0.05 | 0.76 |
| Pond | 3.80 | 2.25 | 1.55 |
| Roadside Ditch | 0.03 | <0.01 | 0.03 |
| ***Total Other Waters*** | ***4.88*** | ***2.30*** | ***2.58*** |
| **GRAND TOTAL** | **7.44** | **2.30** | **5.14** |

*Summation errors may occur due to rounding.*

[1] Does not include off-site infrastructure areas; see **Table 5**.

Because the extent of impact within the off-site infrastructure areas is unknown at this time, aquatic resource impacts associated with work within those areas cannot be estimated with certainty. As such, **Table 5** summarizes the potential maximum amount of aquatic resource impacts that could occur in the off-site areas.

**Table 5. Maximum Aquatic Resource Impacts in the Off-Site Infrastructure Areas**

| Resource Type | Amount in Off-Site Study Areas (acres) | Potential Maximum Impact (acres)[1] |
|---|---|---|
| *Wetlands* | | |
| Seasonal Wetland Swale | 0.02 | 0.02 |
| ***Total Wetlands*** | ***0.02*** | ***0.02*** |
| *Other Waters* | | |
| Ephemeral Drainage | 0.01 | 0.01 |
| Intermittent Drainage | 0.08 | 0.08 |
| ***Total Other Waters*** | ***0.09*** | ***0.09*** |
| **GRAND TOTAL** | **0.11** | **0.11** |

*Summation errors may occur due to rounding.*

[1] Pending final design, it is anticipated that the Project can be designed to avoid direct impacts to Allegheny Creek and potentially to the seasonal wetland swale. As such, the actual impact total is expected to be lower than that shown on the Grand Total line.

To mitigate for expected impacts to aquatic resources, we recommend the following measures:

1. The Project proponent shall apply for a Section 404 permit from the U.S. Army Corps of Engineers for activity that would waters of the U.S. Waters of the U.S. that will be impacted shall be replaced or rehabilitated on a "no-net-loss" basis. Compensatory mitigation in the form of habitat restoration, rehabilitation, and/or replacement shall be at a location and by methods acceptable to the USACE.
2. The Project proponent shall apply for a Section 401 water quality certification from and/or submit a Report of Waste Discharge to the RWQCB and adhere to the certification conditions/WDRs.

Additionally, because the Project requires the crossing of Green Spring Creek in two locations and would result in impacts to the in-stream ponds, the Project proponent shall notify the CDFW consistent with the requirements of Fish and Game Code Section 1600 (Lake or Streambed Alteration) and abide by the conditions of any LSAA issued by CDFW. If any portion of Allegheny Creek and/or the riparian area associated with the creek will be disturbed by work in the northwestern off-site portion of the Study Area, the notification shall include the Allegheny Creek and/or riparian impact details.

Finally, the El Dorado County Zoning Ordinance requires adequate setbacks from aquatic resources. With the exception of work proposed in the areas of the ponds and at road crossings of Green Spring Creek, the proposed Project will avoid direct impacts to aquatic resources (ephemeral drainages, seasonal wetlands, and seasonal wetland swales) within the subdivision development area and portions of Green Spring Creek. Setbacks from aquatic resources vary throughout the subdivision; see **Attachment A** for detail. No additional setbacks from avoided resources are recommended.

## 6.2 Terrestrial Vegetation Communities

As shown on **Figure 6**, the current proposal would permanently impact an area of about 164± acres within the on-site portion of the Study Area. Of the impacted area, about 162 acres are comprised of terrestrial vegetation communities (the remaining 2.0+ acres in the impact area are aquatic resources as described in **Section 6.1** above). **Table 6** summarizes impacts to terrestrial vegetation communities within the on-site portion of the Study Area.

**Table 6. Potential Terrestrial Vegetation Community Impacts in the On-Site Portion of the Study Area**

| Community Type | Amount in Study Area (acres)[1,2] | Potential Impacts (acres) | Avoided (acres) |
|---|---|---|---|
| Annual Brome Grassland | 167.3 | 106.0 | 61.3 |
| Armenian Blackberry Bramble | 0.6 | 0.3 | 0.3 |
| Eucalyptus Woodland | 0.1 | 0.0 | 0.1 |
| Oak Woodland | 109.4 | 54.5 | 54.9 |
| Valley Needlegrass Grassland[3] | <0.1 | <0.1 | 0.0 |
| Serpentine Chaparral | 0.8 | 0.0 | 0.8 |
| Strawberry Field (agriculture) | 1.0 | 0.4 | 0.6 |
| Disturbed | 0.2 | 0.0 | 0.2 |
| Ruderal | 6.8 | 0.5 | 6.3 |
| Urban | 6.9 | 0.5 | 6.4 |
| **TOTAL**[2] | **293.1** | **162.2** | **130.9** |

*Summation errors may occur due to rounding.*

[1] Does not include off-site infrastructure areas; see **Table 7**.

[2] Total amount in Study Area does not include aquatic resources listed in **Table 4**. The combined total for terrestrial vegetation communities and aquatic resources represents the entirety of the on-site study area.

[3] A CDFW-designated Sensitive Natural Community. Impacted area is 0.013 acre.

As described in **Section 6.1** above, the extent of impact within the off-site infrastructure areas is unknown at this time. As such, **Table 7** summarizes the potential maximum amount of terrestrial vegetation community impacts that could occur in the off-site areas. Pending more detailed design, final off-site impact totals are expected to be lower than shown in **Table 7**.

**Table 7. Maximum Terrestrial Vegetation Community Impacts in Off-Site Portions of the Study Area**

| Community Type | Amount in Off-Site Study Areas (acres)[1] | Potential Maximum Impacts (acres) |
|---|---|---|
| Annual Brome Grassland | 7.3 | 7.3 |
| Armenian Blackberry Bramble | <0.1 | 0.0 |
| Oak Woodland[2] | 1.5 | 1.5 |
| Serpentine Chaparral | 1.0 | 1.0 |
| Fremont Cottonwood Riparian Woodland | 0.1 | 0.1 |
| Disturbed | 0.6 | 0.6 |
| Ruderal | 0.3 | 0.3 |
| Urban | 2.4 | 2.4 |
| **TOTAL** | **13.2** | **13.2** |

*Summation errors may occur due to rounding.*

[1] Total amounts in off-site Study Areas do not include off-site aquatic resources listed in **Table 5**.

[2] Oak woodland acreages showing in this table do not include areas that overlap with aquatic resources.

### *6.2.1 Sensitive Vegetation Communities*

The Project would directly affect two sensitive vegetation community resources: oak woodland and Valley needlegrass grassland.

#### 6.2.1.1 Oak Resources

Preliminary estimates indicate that the Project would result in the loss of 56.0 acres of oak woodland (54.5 acres on-site [**Figure 6**] and up to 1.5 acres off-site [**Figure 7**]) and is expected to result in the loss of individual trees protected under the County's Oak Resources Conservation Ordinance. Additional individual oak tree losses may occur in on- or off-site portions of the Study Area. The Oak Woodlands Technical Report that is in preparation by California Tree and Landscape Consulting, Inc., will include detail regarding individual tree impacts. To compensate for the loss of oak resources, we expect the County to require compliance with the following measures, which are derived from the County's Oak Resources Conservation Ordinance:

1. The Project proponent shall complete an Oak Resources Technical Report as required by Chapter 130.39 of the El Dorado County Code. The report shall summarize the oak woodlands within the Study Area, and document the number, size, species, and condition of all native oak trees outside of mapped oak woodlands with a single main trunk measuring greater than six inches in diameter at breast height (DBH) or with a multiple trunk having an aggregate trunk diameter measuring greater than ten inches DBH. The report shall identify all individual native oak trees greater than DBH 24 inches and less than DBH 36 inches occurring within the oak woodlands and all heritage native oak trees (DBH 36 inches and greater) present, including any occurring within the oak woodlands. The report shall identify mitigation at a 1:1 ratio (the ratio used for oak woodland

impacts up to 50% per the El Dorado County Oak Resources Management Plan [El Dorado County 2017]) by one of the following methods:

a) In-lieu fee payment based on the percent of on-site Oak Woodland impacted by the development as shown in Table 5 (Oak Woodland In-Lieu Fee) in the ORMP to be either used by the County to acquire off-site deed restrictions and/or conservation easements or to be given by the County to a land conservation organization to acquire off-site deed restrictions and/or conservation easements;
b) Off-site deed restriction or conservation easement acquisition for purposes of off-site oak woodland conservation consistent with Chapter 4.0 (Priority Conservation Areas) of the ORMP;
c) Replacement planting within an area on-site for up to 50 percent of the total oak woodland mitigation requirement consistent with Section 2.4 (Replacement Planting Guidelines) of the ORMP. This area shall be subject to a Deed Restriction or Conservation Easement
d) Replacement planting within an area off-site for up to 50 percent of the total oak woodland mitigation requirement. Off-site replacement planting areas shall be consistent with Section 2.4 (Replacement Planting Guidelines) and Chapter 4.0 (Priority Conservation Areas) of the ORMP. This area shall be subject to a Deed Restriction or Conservation Easement; or
e) A combination of options a through d above.

2. The Project proponent shall submit an Oak Woodland Removal Permit application consistent with Chapter 130.39 of the El Dorado County Code and El Dorado County Oak Resources Management Plan (El Dorado County 2017).
3. The Project proponent shall implement all requirements of the Oak Woodland Removal Permit issued by El Dorado County and provide documentation showing fulfillment of the 1:1 mitigation requirement.
4. Because the Project would retain areas of oak woodland in the Study Area, a bond or other security instrument as described in El Dorado County Code Section 130.39.070 would be required. The bond or other security instrument shall be required as a condition of issuance of the discretionary permit and/or authorization to protect oak woodlands identified for preservation during the construction period. The form and amount of the security instrument shall be specified by the permit issuing body and approved by County Counsel. No grading or other on-site work shall be permitted until the security is posted.
5. If oak tree replacement planting is proposed for the Project, the Project proponent shall post a bond or other security instrument in an amount equal to the current value of required replacement tree(s) and/or acorns, plus the cost of maintenance and monitoring, as determined by a Qualified Professional (as described in El Dorado County Code Section 130.39.070). No grading or other on-site work shall be permitted until the security is posted.

Note that oak woodland impacts within the off-site areas may be reduced depending upon refinement of impact areas, and it is expected that the final compensatory mitigation requirement for off-site impacts would reflect these final impact areas. No additional mitigation is proposed.

#### 6.2.1.2 Valley Needlegrass Grassland

Valley needlegrass grassland is a CDFW Sensitive Natural Community. Under the current design, the area supporting the Valley needlegrass grassland at the base of an existing embankment would be removed and 0.013 acre of Valley needlegrass grassland community would be directly and permanently impacted. To compensate for this impact, we recommend the following:

To achieve no net loss of Valley needlegrass grassland acreage, mitigation shall include one or more of the following components:

- Establish Valley needlegrass grassland within the Project's open space areas currently characterized by annual grassland;
- Establish Valley needlegrass grassland off-site; or
- Preserve and enhance existing Valley needlegrass grassland within five (5) miles of the Project site.

The Project proponent shall compensate for any loss of Valley needlegrass grassland resulting from Project implementation at a minimum 1:1 replacement ratio. The proposed mitigation plan shall be provided to and approved by the County prior to removal of the Valley needlegrass grassland on site. If the mitigation plan calls for establishing a new area of Valley needlegrass grassland either on- or off-site, it shall include a provision to monitor the compensation area for a period of at least two (2) years following planting.

Additionally, because this work is in the vicinity of Green Spring Creek, it is likely to require a LSAA under Section 1602 of the Fish and Game Code (see **Section 6.1** above). CDFW will review the Project's potential impacts on resources under its jurisdiction and may apply a different and/or additional measure to mitigate the loss of Valley needlegrass grassland.

## 6.3 Special-Status Plants

### *6.3.1 Special-Status Plant Surveys*

Special-status plant surveys conducted throughout the on-site portion of the Study Area in 2021 were negative, but given enough time or a significant disturbance event, plants may become established in areas where suitable habitat exists. Off-site portions of the Study Area, including those adjacent to the on-site portion of the Study Area along Green Valley Road, are scheduled for special-status plant surveys in 2024. In its *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants* (USFWS 2000), the USFWS notes that project sites with inventories older than three (3) years from the current date of project proposal will likely need additional survey. Therefore, if construction in areas surveyed in 2021 does not occur prior to spring 2025, we recommend that the Project proponent complete another round of special-status plant surveys at the appropriate time of year of on-site development areas that would be impacted by the Project prior to commencement of construction. If no special-status plant species are found during the 2024 surveys of off-site areas or, if development area

surveys are repeated and no special status plant species are located during the re-survey, no relocation would be required. If special-status plants are found during any of the surveys and will be impacted, mitigation for those impacts will be determined during consultation with the County. If the plant found is a perennial, then mitigation could consist of digging up the plant and transplanting into a suitable avoided area on-site prior to construction. If the plant found is an annual, then mitigation could consist of collecting seed-bearing soil and spreading into a suitable avoided area on-site prior to construction.

### *6.3.2 Rare Plant Mitigation Fee*

At least a portion of the Study Area is located within Rare Plant "Mitigation Area 1", and as such, Chapter 130.71 of the El Dorado County Code requires the Project proponent to pay the current "Rare Plant Mitigation Fee" prior to issuance of a building permit. That fee is currently $885 per dwelling unit equivalent, but if that fee changes prior to building permit application, the Project proponent would need to pay the applicable fee at that time. No additional mitigation is proposed.

## 6.4 Invertebrates

### *6.4.1 Crotch Bumble Bee*

The Study Area supports suitable nesting and foraging habitat for Crotch bumble bee. As such, we recommend the following measures:

Crotch bumble bee was designated as a candidate for listing under the CESA in 2019, but no decision on listing has been published. If, at the time of project implementation, the species is not a CESA candidate or CESA listed, and it does not fall into any of other special-status categories, then it would not qualify for protections under CEQA and no mitigation is necessary. Furthermore, because Crotch bumble bee is a candidate species, appropriate mitigation measures are still being developed and refined. Madrone has developed the following measure based on current literature and research, including CDFW's *Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species* (CDFW 2023b). If at a later date a different mitigation measure is determined to be more appropriate, that measure can be submitted to the County at that time for review and approval.

- Initial ground-disturbing work (e.g., grading, vegetation removal, staging) shall take place between 1 September and 31 March (i.e., outside the colony active period), if feasible, to avoid impacts on Crotch bumble bee.
- If completing all initial ground-disturbing work between 1 September and 31 March is not feasible, then a senior biologist with 10 or more years of experience conducting biological resource surveys within California shall conduct a pre-construction survey for Crotch bumble bee in the area proposed for impact no more than 14 days prior to the commencement of construction activities. The survey shall occur during the period from one hour after sunrise to two hours before sunset, with temperatures between 65° F and 90° F, with low wind and no rain. If the timing of the start of construction makes the survey infeasible due to the temperature requirements, the surveying

biologist shall select the most appropriate days based on the National Weather Service seven-day forecast and shall survey at a time of day that is closest to the temperature range stated above. The survey duration shall be commensurate with the extent of suitable floral resources (which represent foraging habitat) present within the area proposed for impact and the level of effort shall be based on the metric of a minimum of one person-hour of searching per three acres of suitable floral resources/foraging habitat. A meandering pedestrian survey shall be conducted throughout the area proposed for impact in order to identify patches of suitable floral resources. Suitable floral resources for Crotch bumble bee include species in the following families: Apocynaceae, Asteraceae, Boraginaceae, Fabaceae, and Lamiaceae.

- At a minimum, pre-construction survey methods shall include the following:
    - Search areas with floral resources for foraging bumble bees. Observed foraging activity may indicate a nest is nearby, and therefore, the survey duration shall be increased when foraging bumble bees are present.
    - If bumble bees are observed, attempt to photograph the individual and identify it to species.
    - If Crotch bumble bee is observed, watch any Crotch bumble bees present and observe their flight patterns. Attempt to track their movements between foraging areas and the nest.
    - Visually look for nest entrances. Observe burrows, any other underground cavities, logs, or other possible nesting habitat.
    - If floral resources or other vegetation preclude observance of the nest, small areas of vegetation may be removed via hand removal, line trimming, or mowing to a height of no less than 4 inches to assist with locating the nest.
    - Look for concentrated Crotch bumble bee activity.
    - Listen for the humming of a nest colony.
- The biologist conducting the survey shall record when the survey was conducted, a general description of any suitable foraging habitat/floral resources present, a description of observed bumble bee activity, a list of bumble bee species observed, a description of any vegetation removed to facilitate the survey, and their determination of if survey observations suggest a Crotch bumble bee nest(s) may be present or if construction activities could result in take of Crotch bumble bees. The report shall be submitted to the County prior to the commencement of construction activities.
- If no bumble bees are located during the pre-construction survey or the bumble bees located are definitively identified as common (i.e., not special-status) species, then no further mitigation or coordination with CDFW is required.
- If any sign(s) of a bumble bee nest is observed, and if it cannot be established the species present is not a Crotch bumble bee, then construction shall not commence until either 1) the bumble bees present are positively identification as common (i.e., not special status) by an experienced bumble bee taxonomist, or 2) the completion of coordination with CDFW to identify appropriate mitigation measures, which may include but not be limited to: waiting until the colony active season ends, establishment of nest buffers, or obtaining an Incidental Take Permit (ITP) from CDFW.
- It is recommended, but not required that the Project Applicant also survey the proposed impact areas the year before construction begins in order to avoid potential last-minute delays associated

with identifying Crotch bumble bees on-site immediately prior to construction activities. To be most effective, this optional survey should follow the protocol outlined above.

- If Crotch bumble bees are located, and after coordination with CDFW take of Crotch bumble bees cannot be avoided, the Applicant shall obtain an ITP from CDFW prior to County approval of permits authorizing construction, and the Applicant shall implement all conditions identified in the ITP. Mitigation required by the ITP may include but will not be limited to, the Project Applicant translocating nesting substrate in accordance with the latest scientific research to another suitable location (i.e., a location that supports similar or better floral resources as the impact area), enhancing floral resources on areas of the Project site that will remain appropriate habitat, worker awareness training, and/or other measures specified by CDFW.

### *6.4.2 Monarch*

The Study Area is known to support milkweed, the host plant for monarch butterfly. This species could be adversely affected if construction activity results in the removal of milkweed plants being actively utilized by monarch (either supporting eggs or feeding caterpillars) at the time of construction.

To mitigate for potential impacts to monarch, we recommend the following measure:

- If construction occurs during the time when milkweed plants may host monarch eggs or caterpillars (approximately mid-March through late September) and construction activity would require the removal of milkweed plants, the plants shall be surveyed by a qualified biologist no more than 14 days prior to plant removal for the presence of eggs or caterpillars. If eggs or caterpillars are detected, the plants shall be avoided until they are no longer being utilized by monarch caterpillars, as confirmed by a qualified biologist. If no eggs or caterpillars are detected, no additional protection measures are necessary.

## 6.5 Amphibians

### *6.5.1 California Red-Legged Frog*

The CRLF habitat assessment found that suitable aquatic breeding habitat is present within the two on-site ponds and within an on-site seep (Seep-4 as shown in **Attachment F**). The habitat assessment also found that Green Spring Creek and Allegheny Creek provide potential dispersal habitat. Protocol surveys for CRLF conducted in 2016 and 2023 revealed that the species is absent from the Study Area. However, the results of these surveys are valid for two years and may need to be repeated if construction starts after July 2025.

To ensure that Project construction avoids impacts to CRLF, we recommend the following:

- The surveys conducted in 2023 are valid for two years. If construction does not start before July of 2025, the Project proponent shall hire a qualified biologist to repeat USFWS protocol California red-legged frog (CRLF) surveys in accordance with the *Revised Guidance on Site*

*Assessments and Field Surveys for the California Red-Legged Frog* (USFWS 2005) within the two onsite ponds, Seep S-4, Green Spring Creek and Allegheny Creek as shown on the aquatic resources delineation map for the Generations at Green Valley Project.

- As part of the CWA Section 404 USACE permitting for the Project, the USACE will conduct formal Endangered Species Act consultation with the USFWS on potential impacts to federally-listed species or species that are proposed for listing. The Applicant shall prepare a Biological Assessment, which will include details on potential impacts and mitigation for CRLF, to be submitted to the USACE and the USFWS.
- If it is determined that take of CRLF is likely to occur, the Applicant shall abide by mitigation measures developed during the course of the Endangered Species Act consultation with the USFWS. These mitigation measures could include, but are not limited to, seasonal work restrictions for initial ground disturbance, pre-construction surveys by a qualified biologist, the installation of wildlife exclusion fencing, biological monitoring, and worker environmental awareness training. If it is determined that take of CRLF is likely to occur, additional measures could include preservation, restoration, or enhancement of habitat on- or off-site, purchase of habitat credits from an agency-approved mitigation/conservation bank, working with a local land trust to preserve land, or any other method acceptable to USFWS. The mitigation measures listed below may be implemented if take of CRLF is likely to occur. If the measures listed below differ from mitigation measures included in a Biological Opinion from the USFWS, the measures in the USFWS Biological Opinion take precedence.
    - To mitigate potential impacts to CRLF habitat, the Applicant will preserve CRLF habitat. The preserved habitat shall consist of an onsite preserve, offsite preserved habitat, or the purchase of mitigation bank credits from a USFWS-approved mitigation bank or a combination thereof. Impacts to CRLF habitat will be mitigated at a ratio of 3:1 or another mitigation ratio as agreed upon by the USFWS and the Applicant.
    - Initial ground disturbance shall occur from May 1 through October 15, which is outside of the season when CRLF are most likely to utilize uplands. Daily biological monitoring of the Project shall take place by the qualified biologist during initial ground disturbance within 250-feet of potential CRLF aquatic habitat.
    - Prior to the start of construction, a qualified biologist shall conduct a worker environmental awareness training program for all construction personnel, including contractors and subcontractors. The training shall include, at a minimum, a description of CRLF and their habitats within the Project; an explanation of the species status and protection under state and federal laws; the avoidance and minimization measures to be implemented to reduce take of these species; communication and work stoppage procedures in case these species are observed within the Project; and an explanation of the importance of the Environmentally Sensitive Areas (ESAs) and Wildlife Exclusion Fencing (WEF). A fact sheet conveying this information shall be prepared and distributed to all construction personnel. The training shall provide interpretation for non-English speaking workers. The same instruction shall be provided to any new workers before they are authorized to perform Project work.

- Prior to the start of each phase of construction, ESAs (defined as areas containing sensitive habitats adjacent to or within construction work areas for which physical disturbance is not allowed) shall be clearly delineated using high visibility orange fencing. The ESA fencing shall remain in place while construction activities are ongoing and shall be regularly inspected and fully maintained at all times.
- A qualified biologist shall be onsite during all activities that may result in take of CRLF.
- Prior to the start of construction, a fencing plan shall be submitted to the USFWS for approval prior to installation. Upon approval from the USFWS, WEF shall be installed at the edge of the Project footprint in all areas where sensitive species could enter the construction area. The location of the fencing shall be determined by the contractor and the qualified biologist. The WEF shall include the placement of cover boards every 100 feet on the inside and outside of the WEF. The WEF shall remain in place throughout the duration of the Project phase and shall be regularly inspected and fully maintained. Repairs to the WEF shall be made within 24 hours of discovery. Upon Project completion, the WEF shall be completely removed, the area cleaned of debris and trash, and returned to natural conditions. An exception to the foregoing fencing measures is that for work sites where (i) the duration of work activities is very short (e.g., three days or less), (ii) that occur during the dry season, and (iii) the installation of exclusion fencing will result in more ground disturbance than from Project activities, then the boundaries and access areas and sensitive habitats may be staked and flagged (as opposed to fully fenced) by the qualified biologist prior to disturbance and species monitoring would occur during all Project activities at that site.
- At least 15 days prior to initiation of ground disturbance activities the qualified biologist shall prepare and submit a CRLF Relocation Plan for the USFWS written approval. The plan shall include protocol to be followed should a CRLF be encountered during Project activities. The Relocation Plan shall contain the name(s) of the approved biologist(s) to relocate CRLF, methods of relocation, a map, and description of the proposed release site(s) within the vicinity of the Project and written permission from the landowner to use their land as a relocation site.
- No more than 24 hours prior to the date of initial ground disturbing activities and vegetation clearing, a preconstruction survey for the CRLF shall be conducted by the qualified biologist at the Project. The survey shall consist of walking the construction area limits and within the Project to ascertain the possible presence of the species. The biologist shall investigate all potential areas that could be used by the CRLF for feeding, breeding, sheltering, movement, and other essential behaviors. This includes an adequate examination of mammal burrows, such as California ground squirrels (*Otospermophilus beecheyi*) or gophers. If any CRLF are identified, they shall be relocated outside of the work area in accordance with the USFWS-approved relocation plan. Only USFWS-approved biologists may capture, handle, and monitor CRLF.
- Project site access routes, number and size of staging areas, and work areas, will be limited to the minimum necessary to achieve the Project goals. The final Project plans will depict all locations where ESA and WEF fencing will be installed and will provide

installation specifications. The bid solicitation package special provisions will clearly describe acceptable fencing material and prohibited construction-related activities, including vehicle operation, material and equipment storage, access roads and other surface-disturbing activities within ESAs.

- All equipment will be maintained such that there will be no leaks of automotive fluids such as gasoline, oils, or solvents.
- Hazardous materials – such as fuels, oils, and solvents – will be stored in sealable containers in a designated location at least 200 feet from aquatic habitats. All fueling and maintenance of vehicles and other equipment and staging areas will occur at least 200 feet from any aquatic habitat.
- The Applicant will ensure the qualified biologist or onsite construction manager, or their designee will have full authority to implement and enforce all measures and conditions in the Biological Opinion. A copy of the Biological Opinion will be kept on the Project site whenever construction is in progress. The name(s) and telephone number(s) of the qualified biologist, biological monitor(s) and construction manager and/or designee will be provided to the USFWS at least 30 calendar days prior to groundbreaking at the Project site.
- The qualified biologist or biological monitor(s) will possess a working phone whose number will be provided to the USFWS prior to the start of construction and ground disturbance activities. The biological monitor(s) will keep a copy of the Biological Opinion in their possession when onsite. The Applicant shall give the qualified biologist and biological monitors authority to communicate verbally, by telephone, email, or hardcopy with the Applicant, Project construction personnel, and any other person(s) at the Project site or otherwise associated with the project to ensure that the Terms and Conditions of the Biological Opinion are met. The biological monitor(s) will oversee implementation of the Terms and Conditions in the Biological Opinion and will have the authority to stop Project activities if the monitor(s) determine any of the associated requirements are not being fulfilled. If the biological monitor(s) exercise this authority, the USFWS will be notified by telephone and email within 24 hours.
- Before the start of work each day, the qualified biologist or biological monitor will check for CLRF under any equipment such as vehicles and stored pipes. The biological monitor will check all excavated steep-walled holes or trenches greater than one-foot-deep for any CRLF. CRLF will be removed by the biological monitor and relocated according to the Relocation Plan. To prevent inadvertent entrapment of animals during construction, all excavated, steep-walled holes or trenches more than six inches deep will be covered with plywood (or similar materials) that leave no entry gaps at the close of each working day or provided with one or more escape ramps constructed of earth fill or wooden planks. The qualified biologist or biological monitor will inspect all holes and trenches at the beginning of each workday and before such holes or trenches are filled. All replacement pipes, culverts, or similar structures stored in the action area overnight will be inspected before they are subsequently moved, capped, or buried.

- After the initial ground disturbance has taken place and the site is fenced with WEF, biological monitoring inspections shall take place three times per week during the active season (October 16 through April 30). A qualified biologist shall inspect the construction area, WEF, and cover boards for CRLF. Biweekly monitoring shall occur during the inactive season (May 1 through 15 October).
- If necessary, notify the USFWS of an injured or dead CRLF in the action area within two calendar days of a finding. Written notification to the USFWS will include the following information: the species, number of animals taken or injured, sex (if known), date, time, location of the incident or of the finding of a dead or injured animal, how the individual was taken, photographs of the specific animal, the names of the persons who observed the take and/or found the animal, and any other pertinent information. Dead specimens will be preserved, as appropriate, and held in a secure location until instructions are received from the USFWS regarding the disposition of the specimen.
- If verbally requested before, during, or upon completion of ground disturbance and construction activities, the Applicant will ensure, without delay, the USFWS can immediately access and inspect the project site to gauge compliance with the Biological Opinion, and to evaluate project effects on CRLF and its habitat.
- To prevent CRLF from becoming entangled, trapped, or injured, erosion control materials that use plastic or synthetic monofilament netting will not be used. These prohibited materials include those using photodegradable or biodegradable synthetic netting, which can take several months to decompose. Acceptable materials include natural fibers such as jute, coconut, twine, or other similar fibers. Following construction, any materials left behind as part of the construction, such as straw wattles, should not impede movement of CRLF.
- During construction or long-term operational maintenance in areas supporting upland habitat for the CRLF, no rodenticides will be used at the proposed Project. Larval mosquito abatement efforts such as the treatment of wetlands or ponds with insecticides or the stocking of the non-native mosquitofish (*Gambusia affinis*) should be avoided.
- Construction and ground disturbance will occur only during daytime hours, will cease at sunset, and will not begin again until sunrise.
- Night lighting of staging areas and permanent lighting shall not illuminate the ESAs.
- All foods and food-related trash items will be stored in enclosed sealed trash containers or vehicles and will be removed from the site every three days.
- No pets will be allowed outside of vehicles or construction trailers unless they are on a leash. Pets shall not be allowed in any ESAs or within the onsite preserve.
- No more than a maximum speed limit of 15 mph will be permitted within the Project area.

### *6.5.2 Foothill Yellow-Legged Frog*

Both Green Spring Creek and Allegheny Creek represent dispersal habitat for foothill yellow-legged frog. We recommend the following measures to mitigate potential impacts to this species.

- As part of the CWA Section 404 USACE permitting for the Project, the USACE will conduct formal Endangered Species Act consultation with the USFWS on potential impacts to federally-listed species or species that are proposed for listing. The Applicant shall prepare a Biological Assessment, which will include details on potential impacts and mitigation for foothill yellow-legged frog, to be submitted to the USACE and the USFWS.
- If take of FYLF is determined to be likely, the Applicant shall submit an application for an CDFW Code Section 2081 Incidental Take Permit.
- If it is determined that take of FYLF is likely to occur, the Applicant shall abide by mitigation measures developed during the course of the Endangered Species Act consultation with the USFWS and CDFW. These mitigation measures could include, but are not limited to seasonal work restrictions for initial ground disturbance, pre-construction surveys by a qualified biologist, the installation of wildlife exclusion fencing, biological monitoring, and worker environmental awareness training. If it is determined that take of FYLF is likely to occur, additional measures could include preservation, restoration, or enhancement of habitat on- or off-site, purchase of habitat credits from an agency-approved mitigation/conservation bank, working with a local land trust to preserve land, or any other method acceptable to USFWS and CDFW. The mitigation measures listed below may be implemented if take of FYLF is likely to occur. If the measures listed below The mitigation measures listed below may differ from mitigation measures included in a USFWS Biological Opinion or a CDFW Incidental Take Permit. the measures in the USFWS Biological Opinion and CDFW Incidental Take Permit take precedence.
    - To mitigate potential impacts to FYLF habitat, the Project proponent will restore Green Spring Creek to remove the onsite ponds which are not currently FYLF habitat.
    - The Project proponent shall develop a Pre-Construction Survey Plan for FYLF and submit it to the USFWS and CDFW for approval prior to ground-disturbing activities. The Plan shall include what life-stage(s) shall be surveyed for, survey method(s), and timing of survey(s). The Plan shall provide justification for timing and methodology of survey design (e.g., watershed characteristics, regional snow pack, timing and rate of spring runoff, day length, average ambient air and water temperatures, local and seasonal conditions). For sites with suitable breeding habitat, two consecutive seasons of negative egg mass/larval surveys are recommended to support a negative finding.
    - Within 3-5 days prior to entering or working at the Project site, a USFWS and CDFW-approved biologist shall perform a pre-construction survey, as specified in the Pre-Construction Survey Plan, within the boundaries of the Project plus a 500-foot buffer zone upstream and downstream of the construction area (if permitted by adjacent land owners). The survey shall include a description of any standing or flowing

water. Permittee shall provide Pre-Construction Survey notes and observations to the USFWS and CDFW prior to commencing Covered Activities.

- The Project proponent shall develop a Relocation Plan for FYLF and submit it to the USFWS and CDFW for approval prior to ground-disturbing activities. The Relocation Plan shall include what life stage(s) will be relocated (e.g., adults or egg masses) and specific protocols for each life stage. The Relocation Plan shall quantify the amount, location, and quality of suitable receiving habitat (e.g., breeding and dispersal habitat). The Relocation Plan shall include capture and handling methods specific to each life stage.
- The Project proponent shall ensure that Covered Activities involving construction and heavy equipment use (such as excavation, grading, and contouring) that are conducted in streams, ponds, and riparian areas are limited to the period from May 1 to October 15 of each year (Dry Season). Any work outside of the Dry Season shall be subject to approval of the USFWS and CDFW.
- Wildlife exclusion fencing shall be installed in accordance with the CRLF measure in **Section 6.5.1** above.
- The Project proponent shall develop a Water Diversion Plan for FYLF and submit it to CDFW for approval prior to in-stream activities. The Water Diversion Plan shall contain detailed descriptions of the water intake screening (e.g., screen material, size, cleaning method, etc.), the duration of the water diversion, how the Project proponent will ensure that aquatic life will be maintained or relocated from the dewatered area, diversion materials (unacceptable materials that are deleterious to fish and wildlife include particle board, plastic sheeting, bentonite, pressure-treated lumber, creosote, concrete, or asphalt), and monitoring methods for the diversion.

## 6.6 Reptiles

### *6.6.1 Northwestern Pond Turtle*

As proposed, the Project will directly and permanently impact both ponds in which northwestern pond turtles are present. We recommend the following measures to mitigate potential impacts to this species. If the species is determined to not be eligible for listing by the USFWS at the time of start of construction, Endangered Species Act consultation with the USFWS is not required. However, coordination with CDFW will still be required as the species is a California Species of Special Concern.

- As part of the CWA Section 404 USACE permitting for the Project, the USACE will conduct formal Endangered Species Act consultation with the USFWS on potential impacts to federally-listed species or species that are proposed for listing. The Project proponent shall prepare a Biological Assessment, which will include details on potential impacts and mitigation for northwestern pond turtle, to be submitted to the USACE and the USFWS.
- If it is determined that take of northwestern pond turtle is likely to occur, the Project proponent shall abide by mitigation measures developed during the course of the Endangered Species

Act consultation. These mitigation measures could include, but are not limited to, seasonal work restrictions for initial ground disturbance, dewatering protocols, pre-construction surveys by a qualified biologist, the installation of wildlife exclusion fencing, turtle relocation, nest avoidance, biological monitoring, and worker environmental awareness training. Additional measures could include preservation, restoration, or enhancement of habitat on- or off-site, purchase of habitat credits from an agency-approved mitigation/conservation bank, working with a local land trust to preserve land, or any other method acceptable to USFWS. If the measures listed below differ from mitigation measures differ from mitigation measures included in a Biological Opinion from the USFWS, the USFWS Biological Opinion take precedence.

- Prior to the start of construction activity, the Project proponent shall submit a Pond Dewatering Plan to the USFWS and CDFW for written approval.
- Prior to the start of construction activity, the Project proponent shall submit a Northwestern Pond Turtle Trapping and Relocation Plan to the USFWS and CDFW for written approval. The relocation plan shall include the names of the biologist(s) that will conduct the turtle trapping and relocation, trapping methods, and proposed relocation areas within the vicinity of the Project. As many northwestern pond turtles as possible will be relocated from the onsite ponds prior to pond removal activities.
- Wildlife exclusion fencing shall be installed around the onsite ponds prior to turtle trapping or pond removal activities.
- A qualified biologist shall be present during any work that may harm northwestern pond turtle. The qualified biologist shall have the authority to stop work within the vicinity of a northwestern pond turtle.

### *6.6.2 Coast (Blainville's) Horned Lizard*

There is a low potential for Blainville's horned lizard to occur within the Study Area. However, if the species were present at the time of construction, activity could result in direct harm to individual coast horned lizards. In order to avoid direct mortality to this species, the following measure is recommended:

- Within 14 days prior to the initiation of any construction activity, a qualified biologist shall conduct preconstruction surveys for coast (Blainville's) horned lizard in appropriate habitats. If Blainville's horned lizard is found during the survey, a qualified biologist shall relocate the individuals to suitable habitat outside of the Project area, subject to review and approval by CDFW and/or El Dorado County.

## 6.7 Nesting Birds

Project construction will require the removal of vegetation that provides nesting habitat for migratory bird species, including special-status species such as tricolored blackbird, grasshopper sparrow, golden eagle, white-tailed kite, yellow-breasted chat, loggerhead shrike, and California black rail. If birds are nesting in the Project impact area at the time of construction, activity could disturb nesting birds, resulting in the loss

of eggs or young or nest abandonment. In order to prevent potential disturbance and/or direct effects to active nests, we recommend the following measure:

- If ground disturbance or other construction activities are proposed during the bird nesting season (February 1 – August 31), a focused survey for nesting raptors and migratory bird nests shall be conducted by a qualified biologist within 14 days prior to the beginning of construction activities in order to identify active nests. This survey shall be conducted within the proposed construction area and all accessible areas within the following buffer areas:
  - 0.5 mile for bald eagle and golden eagle
  - 0.25 mile for tree-nesting raptors
  - 500 feet for tricolored blackbird
  - 500 feet for all other species
- Take avoidance burrowing owl surveys of suitable habitat will be conducted consistent with the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). Non-breeding season protocol will be used for surveys conducted between September 1 and January 31 and breeding season protocol will be used for surveys conducted between February 1 and August 31.
- If nests are found, the following no-disturbance buffers shall be established:
  - If active raptor nests are found, no construction activities shall take place within 0.25-mile for golden eagles or within 500 feet of other raptor nest(s) until the young have fledged.
  - If active songbird nests are found, a 100-foot no disturbance buffer will be established. These no-disturbance buffers may be reduced based on consultation and approval by the County.
  - If active tricolored blackbird nests are found, a 500 foot radius no-disturbance buffer shall be established and marked to ensure that construction activity does not encroach into the buffer area. The no-disturbance buffer may be removed, and construction may resume within the buffer area once the young have fledged.
  - If active burrowing owl burrows are found, no construction activities shall take place within 250 feet of occupied burrows, and a no-disturbance buffer shall be marked on-site. The buffer may be removed once the young have fledged and/or are no longer dependent on the nest.
- The perimeter of buffer/no-disturbance areas shall be indicated by bright orange temporary fencing. No construction activities or personnel shall enter the protected area, except with approval of the biologist. If trees containing nests or burrows must be removed as a result of Project implementation, removal shall be completed during the nonbreeding season (late September to March) if possible, or after a qualified biologist determines that the young have fledged (during the breeding season).
- If no active nests are found during the focused survey(s), no further mitigation will be required.
- Survey results shall be provided to the County within 15 days of completion of all surveys. Surveys shall be repeated if there is a break of construction of more than 14 days during the nesting season.

### 6.8 Roosting Bats

Because the Project requires tree removal in oak woodland areas, construction could disturb tree-roosting bat species if they are present at the time of tree removal. In order to prevent potential disturbance and/or direct effects to occupied roosts, we recommend the following measure:

- Pre-construction roosting bat surveys shall be conducted by a qualified biologist within 14 days prior to any tree removal. If no tree removal is proposed, no mitigation measures are necessary. If pre-construction surveys indicate that no roosts of special-status bats are present, or that roosts are inactive or potential habitat is unoccupied, no further mitigation is required. If roosting bats are found, exclusion shall be conducted as recommended by the qualified biologist. Methods may include acoustic monitoring, evening emergence surveys, and the utilization of two-step tree removal supervised by the qualified biologist. Two-step tree removal involves removal of all branches that do not provide roosting habitat on the first day, and the next day cutting down the remaining portion of the tree. Once the bats have been excluded, tree removal may occur.

### 6.9 Worker Environmental Awareness Training

Construction crews must be aware of regulations and conditions that apply to the Project and specific resources in the Study Area. We recommend that the Project proponent implement the following measure to inform construction personnel of the regulations and conditions that apply to the Project:

- Prior to any dewatering, ground-disturbing, or vegetation-removal activities, a Worker Environmental Awareness Training (WEAT) shall be prepared and administered to the construction crews. The WEAT will include the following: discussion of the state and federal Endangered Species Act, the Clean Water Act, the Project's permits and CEQA documentation, and associated mitigation measures; consequences and penalties for violation or noncompliance with these laws and regulations; identification of special-status wildlife, location of any avoided Waters of the U.S; hazardous substance spill prevention and containment measures; and the contact person in the event of the discovery of a special-status wildlife species. The WEAT will also discuss the different habitats used by the species' different life stages and the annual timing of these life stages. A handout summarizing the WEAT information shall be provided to workers to keep on-site for future reference. Upon completion of the WEAT training, workers will sign a form stating that they attended the training, understand the information presented and will comply with the regulations discussed. Workers will be shown designated "avoidance areas" during the WEAT training; worker access should be restricted to outside of those areas to minimize the potential for inadvertent environmental impacts. Fencing and signage around the boundary of avoidance areas may be helpful.

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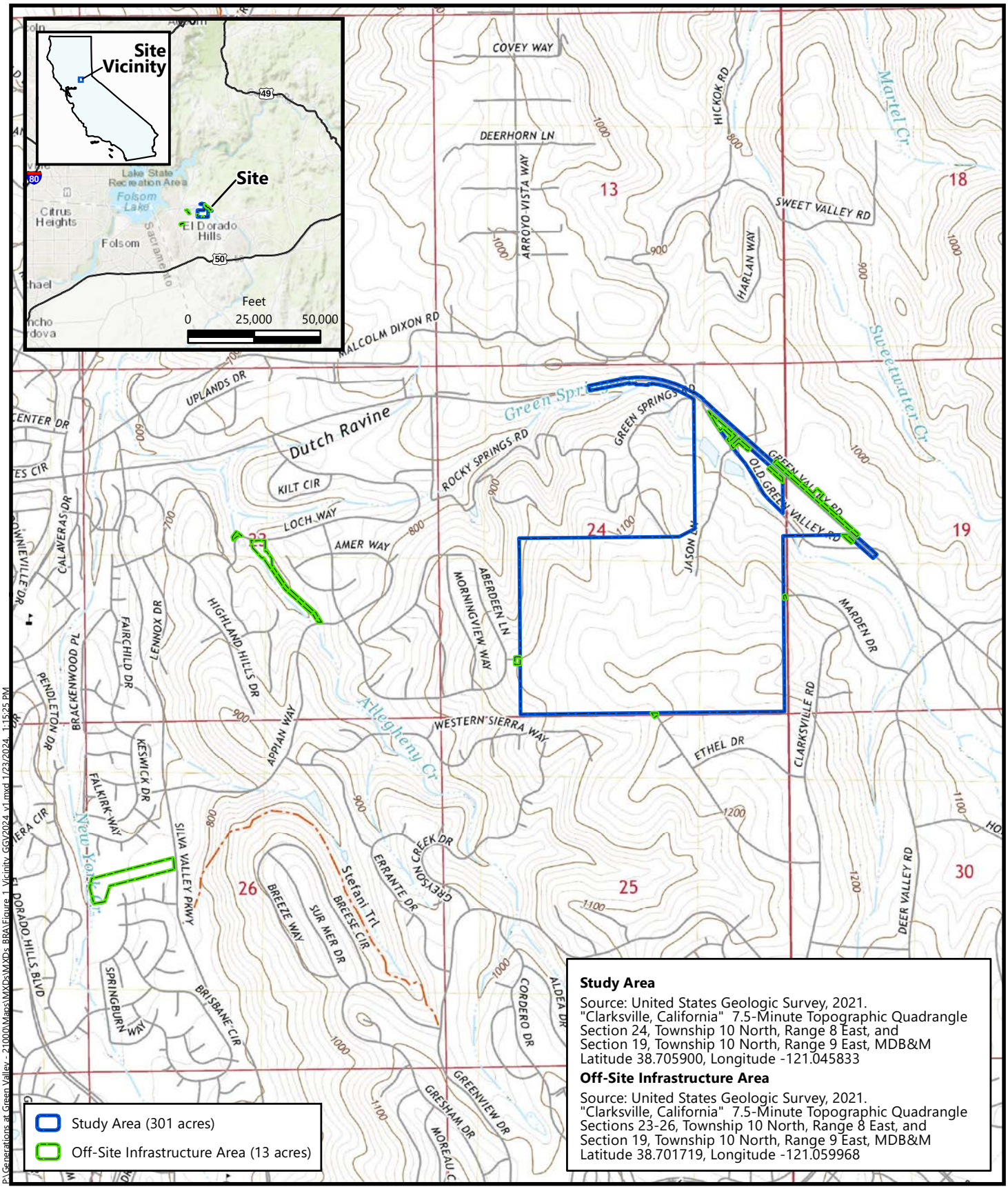
Figure 6. Impacts within the On-Site Portion of the Study Area
Figure 7. Potential Impacts in the Off-Site Infrastructure Area




P:\Generations at Green Valley - 21000\Maps\MXDs\MXDs BRA\Figure 1 Vicinity GGV2024 v1.mxd 1/23/2024 1:15:25 PM

# Figure 1
## Site and Vicinity

*Generations at Green Valley*
*El Dorado County, California*

MADRONE ECOLOGICAL CONSULTING

Source: United States Geologic Survey, 2021.

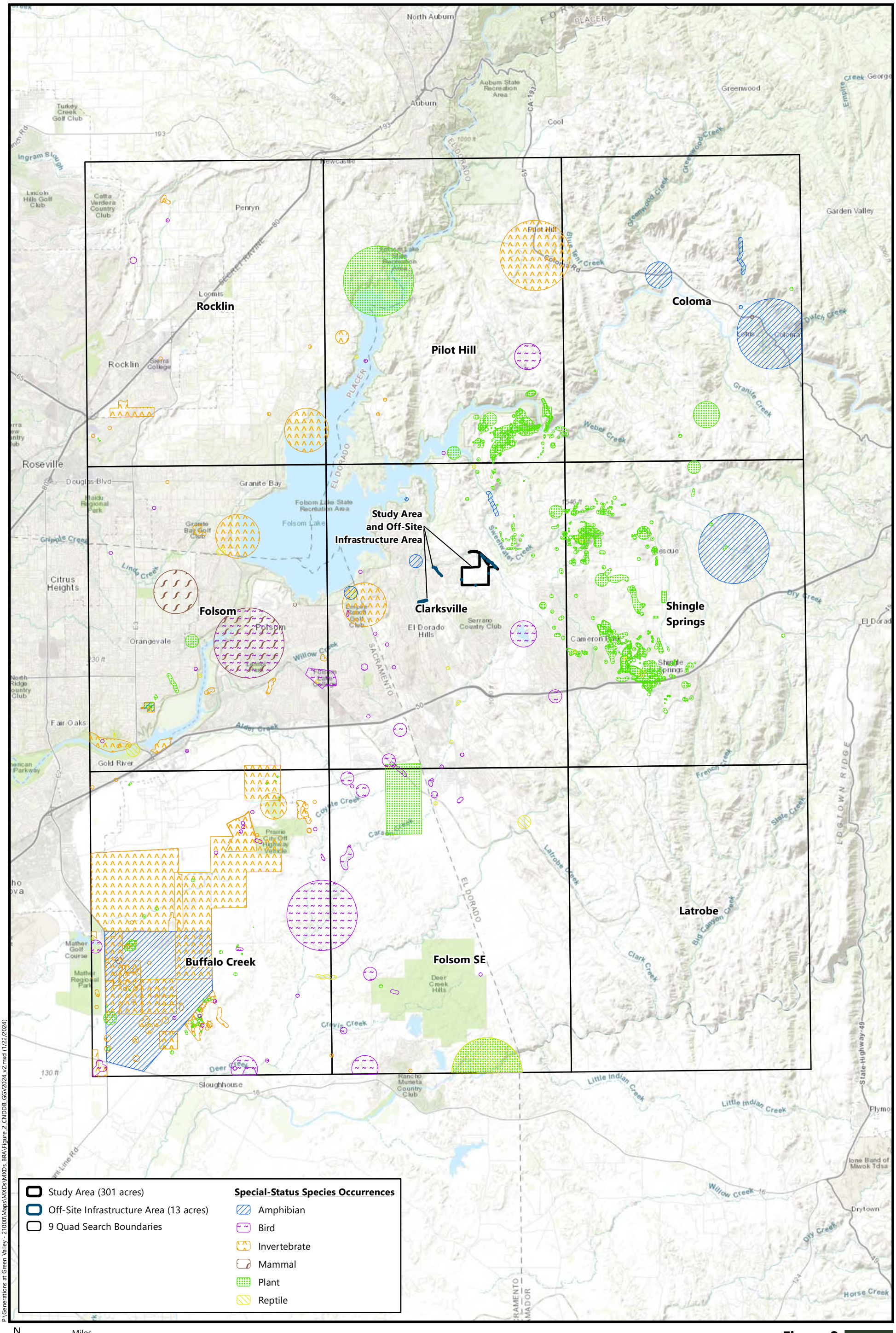
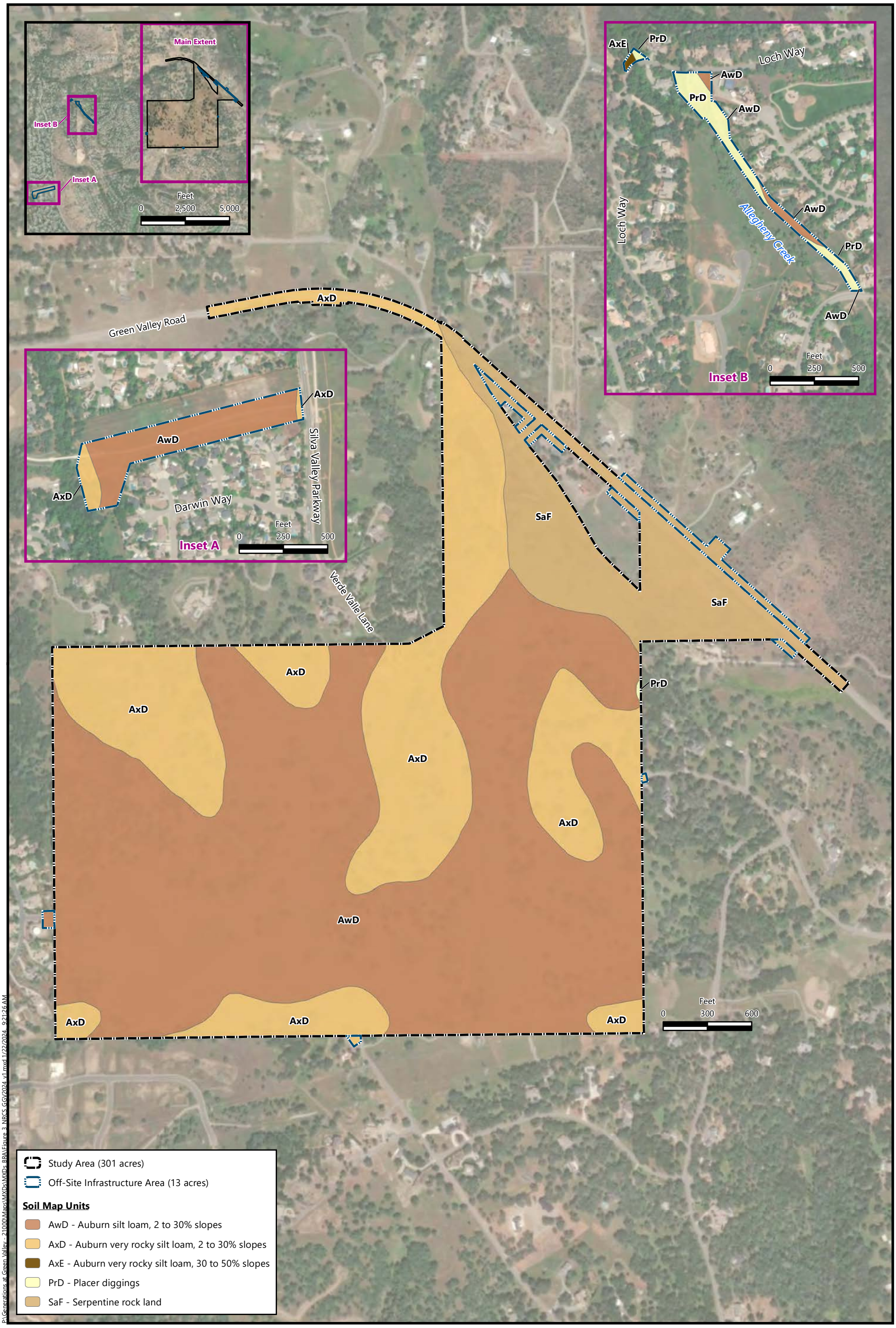



**Figure 2**
**California Natural Diversity Database Occurrences of Special-Status Species**
*Generations at Green Valley*
*El Dorado County, California*

Source: California Department of Fish and Wildlife, January 2024
Basemap Source: ESRI World Topographic Map

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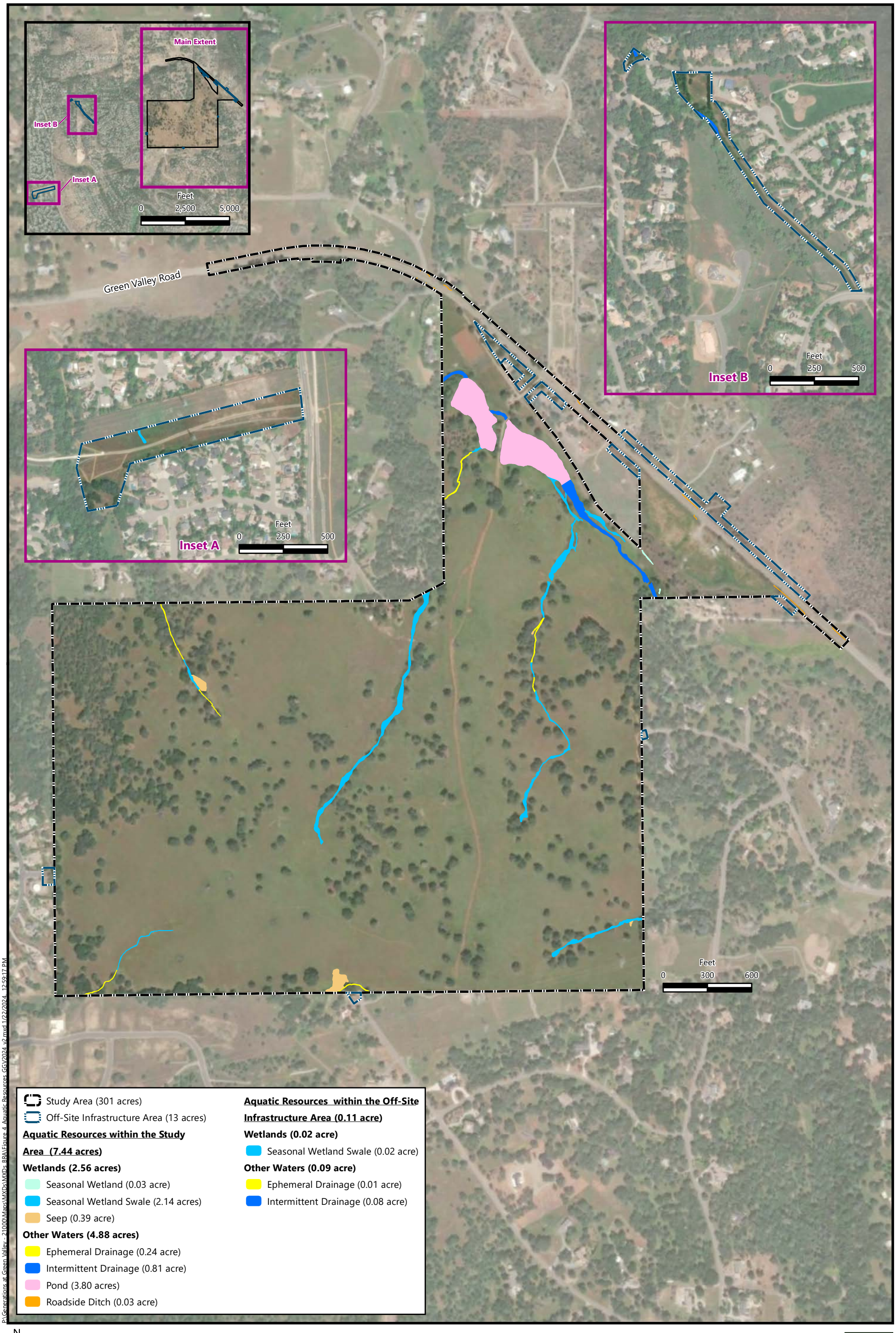
**Soil Survey Source:** *USDA, Soil Conservation Service. Soil Survey Geographic (SSURGO) database for El Dorado Area, California*
**Aerial Source:** Maxar, 1 May 2022.

## Figure 3
## Natural Resources Conservation Service Soils

*Generations at Green Valley*
*El Dorado County, California*

MADRONE ECOLOGICAL CONSULTING




P:\Generations at Green Valley - 21000\Maps\MXDs\MXDs_BRA\Figure 4 Aquatic Resources_GGV2024_v2.mxd 1/22/2024, 12:59:17 PM

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**Figure 4**
**Aquatic Resources**

*Generations at Green Valley*
*El Dorado County, California*

MADRONE ECOLOGICAL CONSULTING

**Note:** Small summation errors may occur due to rounding.
**Aerial Source:** Maxar, 1 May 2022.

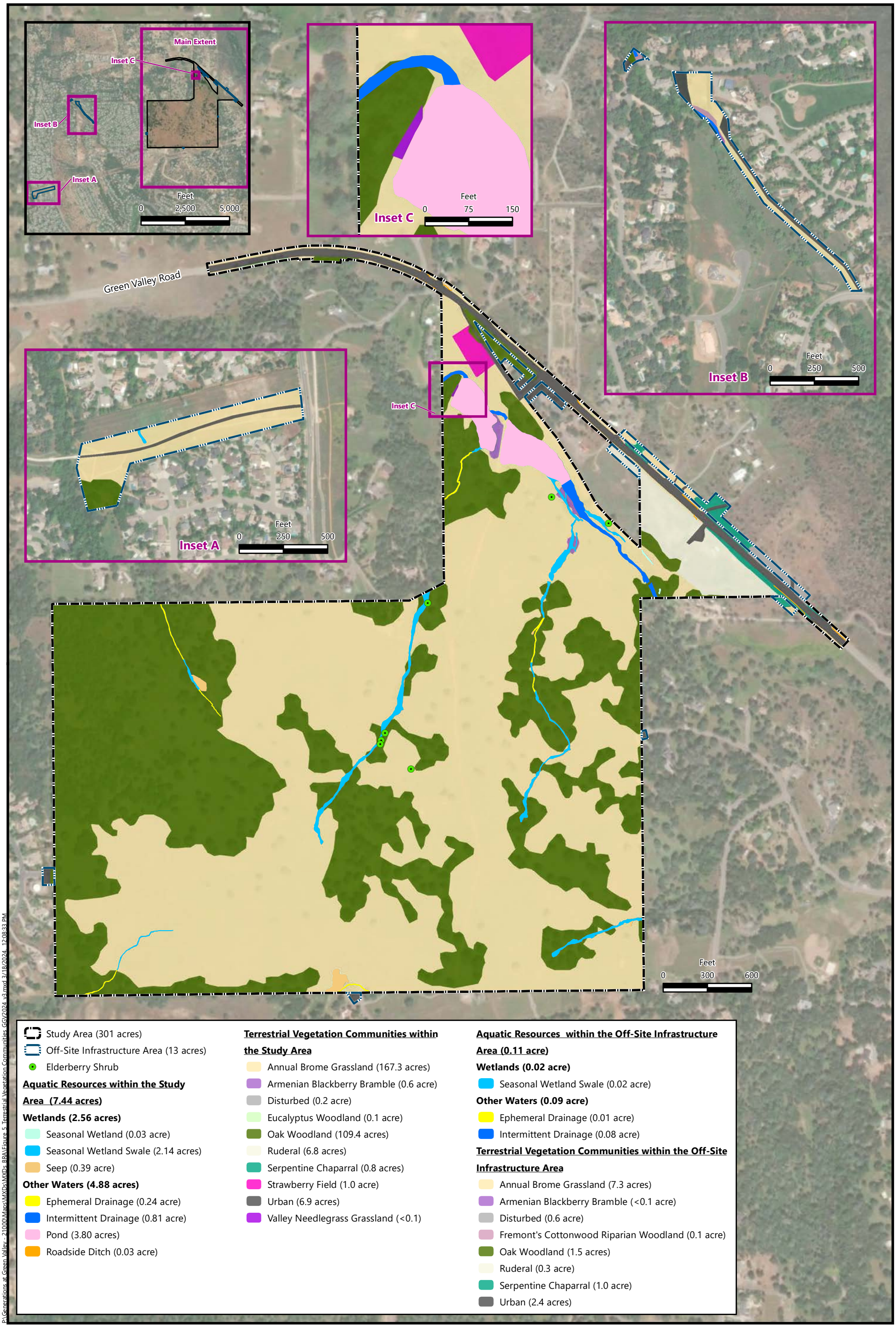
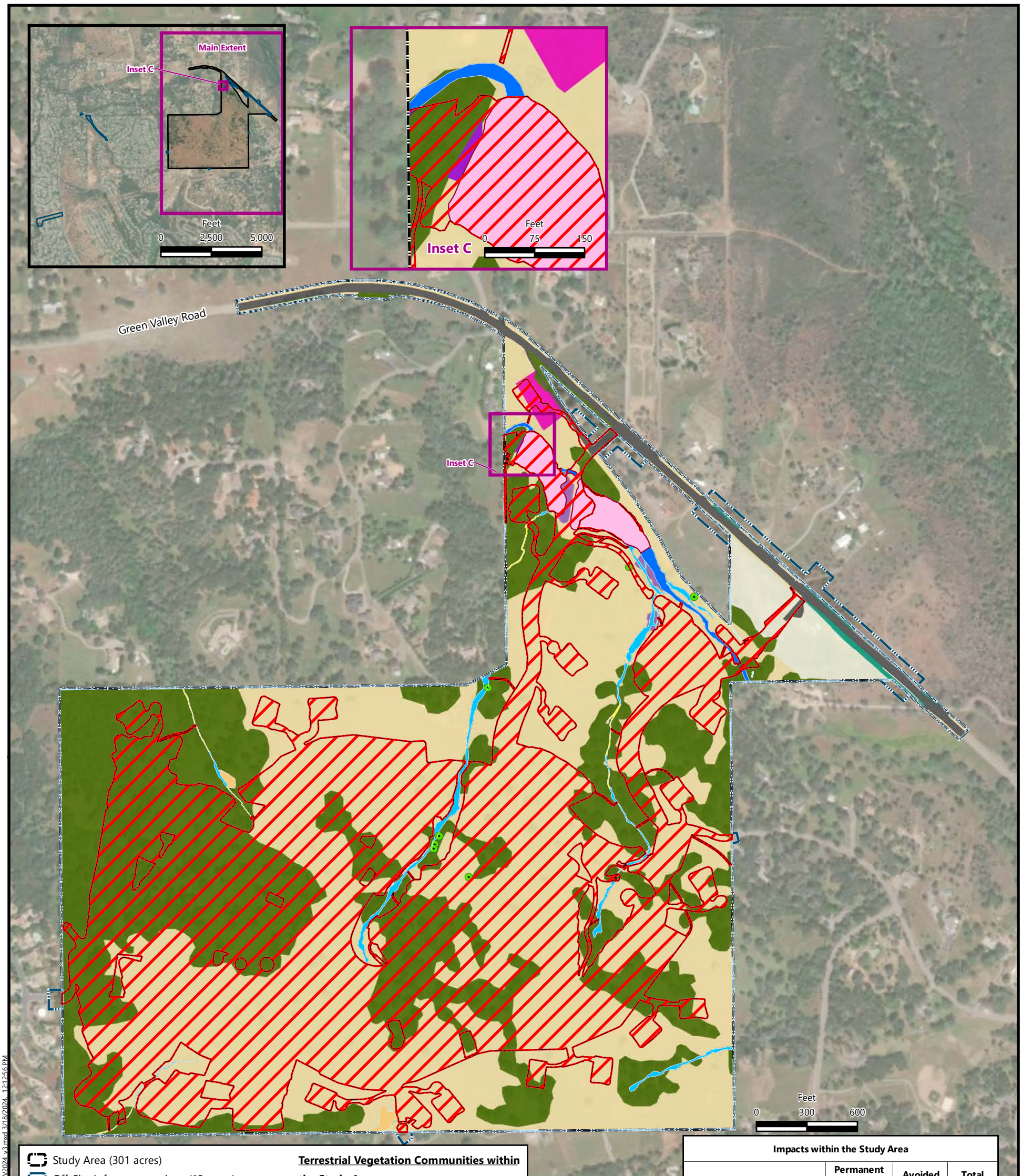



**Figure 5**
**Terrestrial Vegetation Communities**

*Generations at Green Valley*
*El Dorado County, California*

**Note:** Small summation errors may occur due to rounding.
**Aerial Source:** Maxar, 1 May 2022.




Study Area (301 acres)
Off-Site Infrastructure Area (13 acres)
Permanent Impact Area (165 acres)
Avoided Area (136 acres)
Permanently Impacted Aquatic Resources
Avoided Aquatic Resources
Elderberry Shrub

**Aquatic Resources within the Study Area (7.44 acres)**

**Wetlands (2.56 acres)**
- Seasonal Wetland (0.03 acre)
- Seasonal Wetland Swale (2.14 acres)
- Seep (0.39 acre)

**Other Waters (4.88 acres)**
- Ephemeral Drainage (0.24 acre)
- Intermittent Drainage (0.81 acre)
- Pond (3.80 acres)
- Roadside Ditch (0.03 acre)

**Terrestrial Vegetation Communities within the Study Area**
- Annual Brome Grassland (167.3 acres)
- Armenian Blackberry Bramble (0.6 acre)
- Disturbed (0.2 acre)
- Eucalyptus Woodland (0.1 acre)
- Oak Woodland (109.4 acres)
- Ruderal (6.8 acres)
- Serpentine Chaparral (0.8 acres)
- Strawberry Field (1.0 acre)
- Urban (6.9 acres)
- Valley Needlegrass Grassland (<0.1)

**Impacts within the Study Area**

| Aquatic Resources Type | Permanent Impact (acres) | Avoided (acres) | Total Acreage |
|---|---|---|---|
| Seasonal Wetland | 0.00 | 0.03 | 0.03 |
| Seasonal Wetland Swale | 0.00 | 2.14 | 2.14 |
| Seep | 0.00 | 0.39 | 0.39 |
| Ephemeral Drainage | 0.00 | 0.24 | 0.24 |
| Intermittent Drainage | 0.05 | 0.76 | 0.81 |
| Pond | 2.25 | 1.55 | 3.80 |
| Roadside Ditch | <0.01 | 0.03 | 0.03 |
| **Total Aquatic Resources:** | **2.30** | **5.14** | **7.44** |

| Terrestrial Vegetation Communities | Permanent Impact (acres) | Avoided (acres) | Total Acreage |
|---|---|---|---|
| Annual Brome Grassland | 106.0 | 61.3 | 167.3 |
| Armenian Blackberry Bramble | 0.3 | 0.3 | 0.6 |
| Disturbed | 0.0 | 0.2 | 0.2 |
| Eucalyptus Woodland | 0.0 | 0.1 | 0.1 |
| Oak Woodland | 54.5 | 54.9 | 109.4 |
| Ruderal | 0.5 | 6.3 | 6.8 |
| Serpentine Chaparral | 0.0 | 0.8 | 0.8 |
| Strawberry Field | 0.4 | 0.6 | 1.0 |
| Urban | 0.5 | 6.4 | 6.9 |
| Valley Needlegrass Grassland | <0.1 | 0.0 | <0.1 |
| **Total:** | **162.2** | **130.9** | **293.1** |

Note: Small summation errors may occur due to rounding.

N

**Notes:** Small summation errors may occur due to rounding.
Off-site impacts are presented on Figure 7
**Aerial Source:** Maxar, 1 May 2022.

# Figure 6
# Impacts within the Study Area

*Generations at Green Valley*
*El Dorado County, California*

MADRONE ECOLOGICAL CONSULTING

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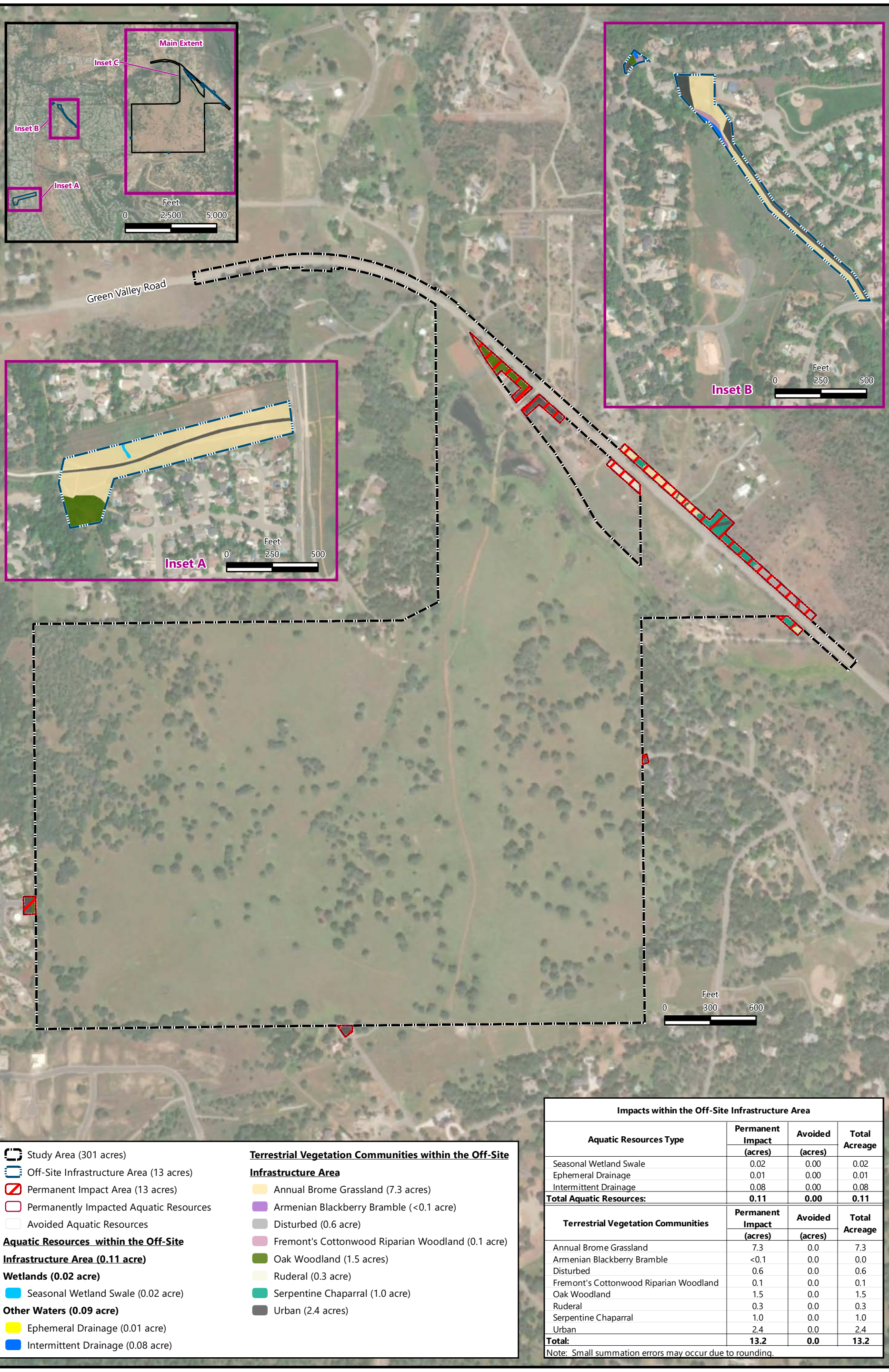



**Impacts within the Off-Site Infrastructure Area**

| Aquatic Resources Type | Permanent Impact (acres) | Avoided (acres) | Total Acreage |
|---|---|---|---|
| Seasonal Wetland Swale | 0.02 | 0.00 | 0.02 |
| Ephemeral Drainage | 0.01 | 0.00 | 0.01 |
| Intermittent Drainage | 0.08 | 0.00 | 0.08 |
| **Total Aquatic Resources:** | **0.11** | **0.00** | **0.11** |

| Terrestrial Vegetation Communities | Permanent Impact (acres) | Avoided (acres) | Total Acreage |
|---|---|---|---|
| Annual Brome Grassland | 7.3 | 0.0 | 7.3 |
| Armenian Blackberry Bramble | <0.1 | 0.0 | 0.0 |
| Disturbed | 0.6 | 0.0 | 0.6 |
| Fremont's Cottonwood Riparian Woodland | 0.1 | 0.0 | 0.1 |
| Oak Woodland | 1.5 | 0.0 | 1.5 |
| Ruderal | 0.3 | 0.0 | 0.3 |
| Serpentine Chaparral | 1.0 | 0.0 | 1.0 |
| Urban | 2.4 | 0.0 | 2.4 |
| **Total:** | **13.2** | **0.0** | **13.2** |

Note: Small summation errors may occur due to rounding.

N

# Figure 7
## Impacts within the Off-Site Infrastructure Area

*Generations at Green Valley*
*El Dorado County, California*

**Note:** Small summation errors may occur due to rounding.
**Aerial Source:** Maxar, 1 May 2022.

P:\Generations at Green Valley - 21000\Maps\MXDs\MXDs BRA\Figure 7_Impacts Off-Site_GGV2024_v3.mxd 3/18/2024, 12:14:50 PM

# Attachments

Attachment A: Preliminary Project Plans

Attachment B. CNDDB Query Results for the "Clarksville, California" Quadrangle and Eight Surrounding Quadrangles

Attachment C. IPaC Trust Resource Report for the Study Area

Attachment D. CNPS Inventory of Rare and Endangered Plants Query for the "Clarksville, California" Quadrangle and Eight Surrounding Quadrangles

Attachment E. Wildlife Species Observed in the Study Area

Attachment F. Aquatic Resources Delineation Map

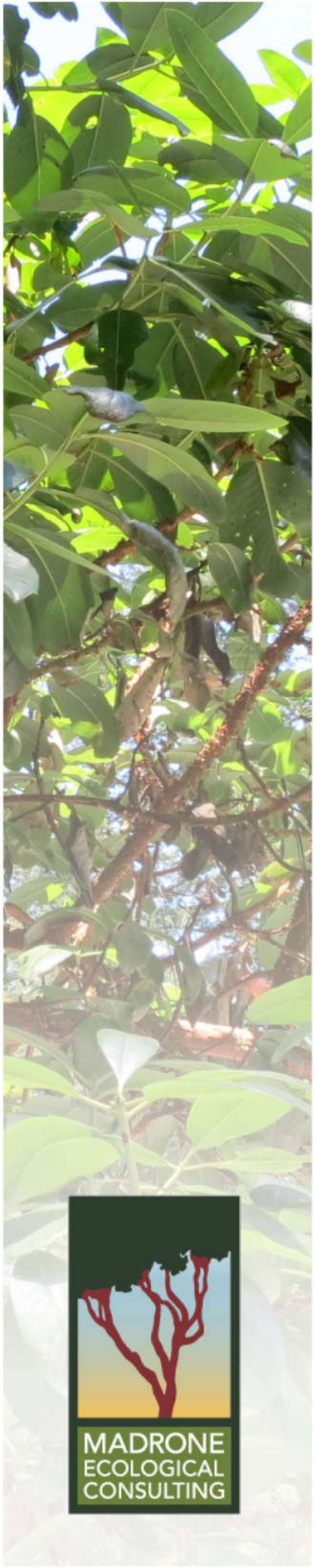
Attachment G. Survey Results: California Red-Legged Frog and California Tiger Salamander

Attachment H. Oak Woodland Assessment

Attachment I. Special-Status Plant Survey Report

# Attachment G

**Survey Results: California Red-Legged Frog and California Tiger Salamander**



# California Red-legged Frog Habitat Assessment and Visual Encounter Survey Report

Generations at Green Valley

El Dorado County
26 January 2024

MADRONE ECOLOGICAL CONSULTING

**Prepared for:**
Green Valley Road Benefits, LLC
110 Blue Ravine Road, Suite 209
Folsom, CA 95630

**Recommended Citation:**
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Figure 4. California Red-Legged Frog Habitat within 1-Mile of the Study Area

## Attachments

Attachment A: Qualifications of Surveyor
Attachment B: Representative Site Photographs
Attachment C: Habitat Assessment Data Form
Attachment D: Survey Data Sheets

# 1.0 INTRODUCTION

## 1.1 Purpose of This Assessment and Surveys

At the request of Green Valley Road Benefits, LLC, Madrone Ecological Consulting, LLC (Madrone) conducted a habitat assessment and visual encounter surveys the federally-threatened California red-legged frog (*Rana aurora*)(CRLF) for the ±314-acre Generations at Green Valley project area (Study Area) in El Dorado County, California. The Study Area is proposed for residential development. The purpose of the habitat assessment and visual encounter surveys is to determine the presence or presumed absence of CRLF within the Study Area. This assessment was prepared in accordance with the *Revised Guidance on Site Assessment and Field Surveys for California Red-Legged Frogs* (USFWS 2005).

In April of 2013 Eric C. Hansen completed a CRLF habitat assessment for the Study Area (Hansen 2013). Visual encounter surveys were conducted within the two large onsite ponds by biologist Adam Johnson (employee of Eric Hansen) from May through July of 2016 (Hansen 2016). No CRLF were identified during these surveys.

It should be noted that the 2016 surveys were conducted in the summer only and did not include surveys that were timed (January through March) to observe egg masses. Since these surveys were conducted, the number of surveys required by the USFWS has increased, the Study Area has changed to add offsite utility improvements, and lastly the results of these surveys are typically valid for only two years. Due to these reasons, Madrone conducted an updated habitat assessment and visual encounter surveys.

## 1.2 Study Area

The 314-acre Generations at Green Valley overall study area (Study Area), which includes a 301-acre on-site subdivision development area and 13-acres of off-site infrastructure developments that may be impacted as a result of Project construction, is generally located along and south of Green Valley Road in unincorporated El Dorado County, California. The on-site portion of the Study Area is located at 3200 Verde Valle Road (APN 126-020-001) within portions of Section 19, Township 10 North, Range 9 East (MDB&M) and Section 24, Township 10 North, Range 8 East of the "Clarksville, California" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2021) (**Figure 1**). Off-site infrastructure areas include (1) areas adjacent to the on-site portion of the Study Area along Green Valley Road and western and southern on-site access points (referred to as off-site adjacent areas); (2) an area approximately 0.6 mile west of the on-site portion along an El Dorado Irrigation District (EID) sewer easement and at a sewer lift station between Appian Way and Loch Way (referred to as the northwestern off-site area throughout this document); and (3) an area approximately 1.1 mile southwest of the on-site portion along a Sacramento Municipal Utility District (SMUD) easement that currently follows an existing paved bike trail (referred to as the southwestern off-site area throughout this document).

## 1.3 Environmental Setting

The Study Area is located on rolling terrain and mostly consists of annual brome grassland and blue oak woodlands. A narrow band of willow riparian scrub occurs along a seasonal wetland swale in the central portion of the Study Area, and two large ponds occur in the northern portion along the intermittent Green Spring Creek. The average annual precipitation for the Study Area is 33.88 inches (WRCC 2021).

The Study Area is primarily composed of undeveloped land. One uninhabitable old homestead and associated outbuildings is present within the northern portion of the Study Area near the ponds and several private, low-use dirt roads occur scattered throughout the Study Area.

The majority of the Study Area supports oak woodland composed chiefly of valley oaks (*Quercus lobata*), live oaks (*Quercus wislizenii*), and blue oaks (*Quercus douglasii*). The understory consists of dogtail grass (*Cynosurus echinatus*), wild oats (*Avena* sp.), rip-gut brome (*Bromus diandrus*), medusa head (*Elymus caput-medusae*), and soft chess (*Bromus hordeacious*).

The annual brome grasslands are dominated by rip-gut brome, medusa head, and soft chess. Other associated species include yellow start-thistle (*Centaurea solstitialis*), Mediterranean barley (*Hordeum murinum*), and split-leaf geranium (*Geranium dissectum*). Some patches of the annual brome grassland support a diverse suite of native forbs, including hyacinth brodiaea (*Triteleia hyacinthina*), Valley sky lupine (*Lupinus nanus*), blue dicks (*Dichelostemma capitatum*), and field popcorn flower (*Plagiobothrys fulvus*).

Off-site infrastructure study areas range between a low of about 670 feet above mean sea level for the northwestern off-site area to about 1,050 for off-site area adjacent to the main portion of the Study Area. The northwestern off-site area is primarily comprised of a gravel access road with adjacent annual brome grassland. The northern portion of this area includes a reach of the intermittent Alleghany Creek and its adjacent Fremont cottonwood riparian woodland. An area of residential landscaping also occurs within this off-site area. The northwestern off-site area includes a lift station site on the north/west side of Loch Way. This urban area supports a pump station, a small area of interior live oak woodland just east of the lift station, and a short reach of Alleghany Creek with associated Fremont cottonwood riparian woodland on the eastern side.

The southwestern off-site area is almost entirely comprised of a transmission line corridor. An asphalt recreational trail with broad decomposed granite shoulders winds through the center, and the remainder is largely comprised of an annual brome grassland. The exception is an area of interior live oak woodland in the southern portion of this off-site area.

The majority of the on-site Study Area generally drains to the north/northeast into Green Spring Creek. Green Spring Creek, which traverses the northern portion of the Study Area from east to west, is tributary to Folsom Lake by way of New York Creek. The southwestern corner of the Study Area appears to drain to the south and into Allegheny Creek, which is also a tributary to Folsom Lake by way of Green Spring Creek and New York Creek, respectively.

The Study Area supports seven types of aquatic features: seeps, seasonal wetland swales, seasonal wetlands, ponds, intermittent drainage (Green Spring Creek), ephemeral drainage, and roadside ditch (**Figure 2** and **Table 1**). A description of aquatic resources mapped within the Study Area follows.

**Table 1. Aquatic Resources in the Study Area**

| Resource Type | Amount in On-Site Study Area (acres) | Amount in Off-Site Study Areas (acres) | Total in Study Area (acres) |
|---|---|---|---|
| *Wetlands* | | | |
| Seep | 0.39 | – | 0.39 |
| Seasonal Wetland Swale | 2.14 | 0.02 | 2.16 |
| Seasonal Wetland | 0.03 | – | 0.03 |
| ***Wetlands Total*** | ***2.56*** | ***0.02*** | ***2.58*** |
| *Other Waters* | | | |
| Ephemeral Drainage | 0.24 | 0.01 | 0.25 |
| Intermittent Drainage | 0.81 | 0.08 | 0.89 |
| Pond | 3.80 | – | 3.80 |
| Roadside Ditch | 0.023 | – | 0.02 |
| ***Other Waters Total*** | ***4.88*** | ***0.09*** | ***4.96*** |
| **GRAND TOTAL** | **7.44** | **0.11** | **7.54** |

*Summation errors may occur due to rounding.*

## 1.4 Species Biology, Habitat, and Distribution

CRLF was federally listed under the Endangered Species Act as threatened on June 24, 1996 (USFWS 1996). Among the native frog species of the western United States, CRLF is the largest (Wright and Wright 1949), measuring 1.5 to 5.1 inches (in) in length (Stebbins 2003). Adult individuals are characterized by prominent dorsolateral folds on their back region with spots that have light centers (Stebbins 2003). Individual frogs typically have red or orange abdomens and hind legs, with small black flecks and irregular dark blotches with brown, gray, olive or reddish indistinct outlines across the dorsal surface. Larval body lengths range from 14 to 80 millimeters (mm) (0.6 to 3.1 in) with a body background color of dark brown or olive green, to yellow with dark spots (Storer 1925).

CRLF habitat is characterized by riparian vegetation associated with slow-moving water that is relatively deep (>0.7 meters [m]). Emergent and edge vegetation requirements are highly variable and include willow (*Salix* sp.), cattails, and bulrushes (*Schoenoplectus* spp.) providing appropriate habitat (Jennings and Hayes 1994). Adults can be found in both ephemeral and perennial streams and ponds; although stable populations require permanent freshwater (salinity ≤4.5%) water sources for the larval life stage (Jennings and Hayes 1994). Riparian vegetation and mammal burrows near water sources also provide refuge to estivating adults (USFWS 1996). Adults may utilize mammal burrows, desiccation cracks on pond bottoms, or dense vegetation and debris piles when aquatic breeding habitat dries (Alvarez 2004).

Adults breed from November through March, with females laying 500 to 5,000 eggs within large, gelatinous egg masses attached to submergent or emergent vegetation (Alvarez et al. in press). Eggs hatch 6 to 14 days after deposition, with larvae undergoing metamorphosis 3.5 to 7 months after hatching. Eggs and larvae are intolerant of salinity, with egg mortality reaching 100 percent in water with salinity levels greater than 4.5 parts per thousand (ppt), and larvae when exposed to salinity levels higher than 7 ppt (USFWS 1996).

The range of CRLF historically occurred in 46 counties throughout California, including areas of the Central Valley floor, Sierra Nevadan foothills, and Coast Ranges. Historically, the species extended as far north as Shasta County and down to Baja California in the southern end of its range (Jennings and Hayes 1994). Currently, CRLF is found in 22 counties, with significant populations found in coastal drainages between Point Reyes (Marin County) and Santa Barbara (Santa Barbara County) (Jennings and Hayes 1994). CRLF intergrades with northern red-legged frog (*Rana aurora*) in Mendocino County, CA (Hayes and Miyamoto 1984, Shaffer et al. 2004). CRLF have been extirpated from almost the entire Central Valley with some populations remaining in the Tracy/Mountain House area. There are very few extant populations of CRLF remaining within the Sierra Nevada Foothills. The nearest known extant population to the Study Area is near Pollock Pines in El Dorado County and in the town of Michigan Bluff in Placer County. These populations are over 20 miles east and northeast of the Study Area (**Figure 3**). See Section 3.2 below for additional information on nearby observations of CRLF.

### 1.5 Critical Habitat

On 17 March 2010, USFWS published a final rule revising the designation of Critical Habitat for CRLF [Federal Register Vol. 75, No. 51:12816]. Critical habitat was designated in 22 counties within California, for a total of ±1,636,609 acres (662,312 hectares).

Based upon the current knowledge of the life history, biology, and ecology of CRLF, Critical Habitat requires the following Primary Constituent Elements (PCEs):

1. *Aquatic Breeding Habitat:* Standing bodies of fresh water (with salinities less than 4.5 ppt), including natural and manmade (e.g., stock) ponds, slow-moving streams or pools within streams, and other ephemeral or permanent water bodies that typically become inundated during winter rains and hold water for a minimum of 20 weeks in all but the driest of years.
2. *Aquatic Non-Breeding Habitat:* Freshwater pond and stream habitats, as described above, that may not hold water long enough for the species to complete its aquatic life cycle but which provide for shelter, foraging, predator avoidance, and aquatic dispersal of juvenile and adult California red-legged frogs. Other wetland habitats considered to meet these criteria include, but are not limited to: plunge pools within intermittent creeks, seeps, quiet water refugia within streams during high water flows, and springs of sufficient flow to withstand short-term dry periods.
3. *Upland Habitat:* Upland areas adjacent to or surrounding breeding and non-breeding aquatic and riparian habitat up to a distance of 1 mi (1.6 km) in most cases (i.e., depending on surrounding landscape and dispersal barriers) including various vegetational types such as grassland, woodland, forest, wetland, or riparian areas that provide shelter, forage, and predator avoidance for the California red-legged frog. Upland features are also essential in that they are needed to maintain the hydrologic, geographic, topographic, ecological, and edaphic features that support and surround the aquatic, wetland, or riparian habitat. These upland features contribute to: (1) Filling of aquatic, wetland, or riparian habitats; (2) maintaining suitable periods of pool inundation for larval frogs and their food sources; and (3) providing non- breeding, feeding, and sheltering habitat for juvenile and adult frogs (e.g., shelter, shade, moisture, cooler temperatures, a prey base, foraging opportunities, and areas for predator avoidance). Upland habitat should include structural features such as boulders, rocks and organic debris (e.g., downed trees, logs), small mammal burrows, or moist leaf litter.
4. *Dispersal Habitat:* Accessible upland or riparian habitat within and between occupied or previously occupied sites that are located within 1 mi (1.6 km) of each other, and that support movement between such sites. Dispersal habitat includes various natural habitats, and altered habitats such as

agricultural fields, that do not contain barriers (e.g., heavily traveled roads without bridges or culverts) to dispersal. Dispersal habitat does not include moderate- to high-density urban or industrial developments with large expanses of asphalt or concrete, nor does it include large lakes or reservoirs over 50 ac (20 ha) in size, or other areas that do not contain those features identified in PCE 1, 2, or 3 as essential to the conservation of the species.

## 2.0 HABITAT ASSESSMENT METHODS

The site assessment followed guidance provided in USFWS' *Revised Guidance on Site Assessments and Field Surveys for the California Red-Legged Frog* (USFWS 2005).

Prior to the field site assessment, a review of the known records of the species was conducted. The California Natural Diversity Database's (CNDDB's) Biogeographic Information and Observation System online mapping tool (CDFW 2021) was used to identify records of CRLF within 1.0 mile (1.6 km) of the Study Area, which represent known occurrences in the vicinity of the Study Area. Records within 3.1 miles (5 km) of the Project site were also identified, as recommended in the Protocols in order to place the Project site in a regional perspective.

The habitat assessment was conducted for the on-site portion on 5 November 2021 and for the off-site portion on 19 January 2024 by Madrone biologist Dustin Brown. See **Attachment A** for surveyor qualifications. Aquatic habitats and adjacent uplands were evaluated for their potential to support breeding, foraging, dispersal and refugia or aestivation habitat. During the site visits, all wetlands located within the Study Area were visited and assessed for the potential to provide suitable aquatic habitat for CRLF. Habitat assessments were completed for aquatic features that could potentially pond water through the spring and early summer, as well as adjacent uplands surrounding such aquatic features. Three aquatic features within the Study Area were determined to pond for extended periods, and as such, were evaluated during field surveys: Pond 1, Pond 2, and Seep 4 (**Figure 4**). Field-based habitat assessments were conducted by walking the perimeter of the wetland features and through adjacent upland areas. Variables observed and recorded included habitat type, size, approximate depth, substrate, location, plant assemblages, presence of potential refugia, and general hydrology notes.

Potential aquatic habitats for CRLF within 1.0 mile of the Study Area were also assessed for potential to provide suitable habitat to CRLF. The off-site areas were assessed via aerial photograph as these areas were on private property.

## 3.0 HABITAT ASSESSMENT RESULTS

### 3.1 Range and Critical Habitat

The Study Area is located within the current range of CRLF. There is no critical habitat for CRLF within 3.1 miles of the Study Area. The nearest Critical Habitat (Unit ELD-1) is located approximately 20 miles east of the Study Area (**Figure 3**).

### 3.2 Documented Occurrences

There are no documented occurrences of CRLF within 1.0 mile of the Study Area. There is one unverified observation of CRLF located approximately 2.6 miles northwest of the Study Area along Folsom Lake (CNDDB Occurrence Number 814). This observation consists of a single "red" frog observed jumping off of

a pedestrian bridge into a creek by a State Parks employee. Several amphibian biologists have searched this area through the years in order to determine whether there is a population of CRLF in the vicinity but no CRLF have been observed (CDFW 2021) this observation is assumed to be a misidentification.

There are two occurrences of CRLF (CNDDB Occurrence Numbers 1284, 1317, and 1377) located approximately 14 miles northeast and southeast of the Study Area. There is a large known population of CRLF located within the town of Michigan Bluff (CNDDB Occurrences 446 and 890) approximately 25 miles northeast of the Study Area. There is a known population of CRLF located within Webber Creek and Spivey Reservoir (CNDDB Occurrence Number 586) approximately 22 miles east of the Study Area (CNDDB 2021)(**Figure 3**).

## 3.3 On-Site Habitat

There are three aquatic resources (Pond 1, Pond 2, and Seep 4) within the Study Area that represent potential aquatic breeding habitat for CRLF. Green Spring Creek (intermittent drainage) and Allegheny Creek within the Study Area represent potential dispersal habitat for CRLF. Please see below for descriptions of each of the aquatic features that were included in this assessment. See **Figure 4** for locations of these features and see **Attachment B** for photographs of each feature. See **Attachment C** for site assessment data form.

### *3.3.1 Pond 1*

Pond 1 is located along Green Spring Creek within the northern portion of the Study Area. This pond is an in-stream stock pond that was manmade and contains an earthen dam with a rock and mortar spillway. The surface area of this pond is approximately 500 feet by 200 feet at maximum inundation and maximum depth is approximately 8 feet. Emergent vegetation is abundant, covering approximately 30 percent of the surface, and consists of bullrush. Approximately 20 percent of the shoreline along the southeast bank is vegetated with blackberry brambles and the rest of the shoreline is vegetated by annual grasses and forbs. Pond 1 is surrounded by annual grassland that is cattle grazed. This feature was full at the time of the survey and was being fed by Green Spring Creek at a rate of approximately 0.5 cubic feet per second. The water was clear and no fish or turtles were observed within the pond. No wading birds were foraging in Pond 1 as this feature dried in the summer and fall of 2021 and no fish are present. Signs of recent high flashy flows were observed along the northern shore of this pond. It appeared that the large storm in mid-October that dropped over seven inches of rain in two days caused the creek to flow at a very high rate and raise the level of the pond by as much as three feet above the ordinary high water mark. This pond appears to be semi-perennial and dries during below average rain years.

### *3.3.2 Pond 2*

Pond 2 is located along Green Spring Creek approximately 50 feet downstream of Pond 1. Similar to Pond 1, Pond 2 is an in-stream stock pond that was manmade and contains an earthen dam with a spillway. Surface area of this pond is approximately 450 feet by 160 feet at maximum inundation and maximum depth is approximately 10 feet. Emergent vegetation is moderately abundant covering approximately 25 percent of the surface and consists of bullrush and young willows. Approximately 60 percent of the shoreline is vegetated with bullrush, 20 percent is vegetated with blackberry brambles, and the rest of the shoreline is vegetated by annual grasses and forbs. Pond 2 is surrounded by annual grassland and oak savannah that is cattle grazed to the south and east and a strawberry farm and rural residential properties to the north and west. This feature was full at the time of the survey and was being fed by Green Spring Creek at a rate

of approximately 0.5 cubic feet per second. The water was clear and mosquito fish (*Gambusia affinis*) was observed within the pond. Also, a great blue heron (predatory wading bird) was observed foraging in Pond 2 meaning that fish are present. This pond appears to be perennial and may support predatory game fish.

### *3.3.3 Seep S-4*

Seep S-4 is located within the northeastern portion of the Study Area along an ephemeral drainage situated within an oak savannah. This seep is a natural feature that has been excavated to form a perennial pool. Stacked stone was used to create a spring box and the box also contains a dilapidated timber and corrugated steel covering. Surface area is approximately 8 feet by 12 feet at maximum inundation and maximum depth is approximately 3 feet. No vegetation was observed in the seep. This feature was observed to contain water during the summer of 2021 (very dry year) and is likely perennial. The seep is also used to supply water to cattle troughs approximately 70 feet downstream of the seep. The seep represents potential CRLF breeding and dispersal/refugia habitat.

### *3.3.4 Intermittent Drainage - Green Spring Creek*

Green Spring Creek within the Study Area is a rocky seasonal stream that flows during the rainy season and for portions of the spring and early summer. It is likely dry by mid to late summer. This creek contains riffle and run habitats with no main channel pools or thick riparian vegetation. Flows within Green Spring Creek are likely flashy during rain events. No suitable CRLF breeding or refugia habitat was observed within Green Spring Creek within the Study Area. This creek may serve as migration/dispersal habitat for CRLF.

### *3.3.5 Intermittent Drainage - Allegheny Creek*

Allegheny Creek within the Study Area is a rocky seasonal stream that flows during the rainy season and for portions of the spring and early summer. It is likely dry by mid to late summer. This creek contains riffle and run habitats with no main channel pools. Dense willow and blackberry riparian vegetation line the banks of the creek. Flows within Allegheny Creek are likely flashy during rain events. No suitable CRLF breeding habitat was observed within Allegheny Creek within the Study Area. This creek may serve as migration/dispersal habitat for CRLF.

### *3.3.6 Other Aquatic Resources*

Other aquatic resources located within the Study Area include seasonal wetlands, seasonal wetland swales, seeps, ephemeral drainages, and roadside ditches. These features were assessed for the potential to provide aquatic habitat, be it breeding, refugia, or dispersal habitat, for CRLF. The other aquatic resources within the Study Area are very shallow and do not contain water for long enough periods to provide suitable aquatic habitat for CRLF.

## 3.4 Off-Site Habitat

Potential habitat for CRLF within 1-mile of the Study Area was identified by aerial photograph. A total of eight aquatic features representing potential breeding habitat or dispersal habitat for CRLF were identified within 1.0 mile of the Study Area. These features consist of six ponds representing potential breeding habitat for CRLF and three streams (Green Spring, New York, and Allegheny Creeks) representing potential CRLF dispersal habitat. There do not appear to be any barriers present between these aquatic features and the Study Area. Please see **Figure 4** for locations of potential off-site CRLF habitat.

### 3.5 Barriers to Dispersal

There are no natural or manmade barriers for CRLF dispersal within the Study Area. The nearest potential barrier is Green Valley Road located just north of the Study Area. This two-lane road may limit the dispersal of CRLF, but it is not a complete barrier and individual CRLF could cross the road.

## 4.0 HABITAT ASSESSMENT CONCLUSIONS

Suitable aquatic breeding habitat for CRLF was observed within the two onsite ponds and within Seep S-4 within the Study Area. Also, Green Spring and Allegheny Creeks within the Study Area represents suitable dispersal habitat for CLRF. Survey

Species known to be predators of CRLF including Centrarchids (*Lepomis* sp.) and American bullfrog (*Lithobates catesbeianus*) were observed in large numbers within the ponds, which may reduce or eliminate the potential for CRLF to be present.

Even though there is potentially suitable habitat for CRLF within the Study Area, there are no known or verified populations of CRLF within 3.1 miles of the Study Area. The nearest observation along Folsom Lake is unverified and is likely a misidentification. The nearest viable breeding populations of CRLF to the Study Area are all over 2,000 feet in elevation (substantially higher than the Study Area) and are over 15 miles away.

In conclusion, while the Study Area contains potential habitat for CRLF, the presence of bullfrogs and predatory game fish and the distance from the Study Area to verified populations of CRLF, means that the likelihood of CRLF being present within the Study Area is low.

## 5.0 CRLF SURVEYS

Madrone biologist Dustin Brown conducted USFWS protocol visual encounter surveys for the three aquatic resources that represent potential CRLF breeding habitat from January through July 2023. The methods and results of the surveys are included below.

### 5.1 CRLF Survey Methods

Eight surveys, including three daytime and five nighttime surveys were conducted according to the USFWS protocols. The surveys targeted the three aquatic resources identified in the habitat assessment as being potential CRLF breeding habitat and included the two large ponds and Seep 4. Mr. Brown conducted a pedestrian visual encounter survey of each of the targeted aquatic features. The surveys were assisted by binoculars (Pentax 8x43 DCF SP) as well as Nite Light headlamp and Streamlight Strion HPL handheld spot light. Mr. Brown recorded species, life stage, and numbers of all amphibian and reptiles observed during the survey on data sheets (**Attachment D**). Additionally, Mr. Brown inspected submerged vegetation along the margins of the features for the presence of CRLF egg masses during the two daytime surveys on 25 January and 22 February 2023. The eight surveys consisted of three daytime surveys conducted on 25 January, 22 February, and 5 July 2023 and five nighttime surveys conducted on 8 February, 6 March, 19 April, 7 June, and 5 July 2023.

## 5.2 CRLF Survey Results

No CRLF were observed during the surveys. Amphibians observed during the surveys included the common Sierran treefrog (*Pseudacris sierra*), western toad (*Anaxyrus boreas*), and the invasive American bullfrog. Both ponds contain abundant CRLF predators including black bass (*Micropterus* sp.), bluegill (*Lepomis macrochirus*), Sacramento sucker (*Catostomus occidentalis*), red swamp crayfish (*Procambarus clarkia*), great egret (*Ardea alba*), great blue heron (*Ardea herodias*), racoon (*Procyon lotor*), north American river otter (*Lontra canadensis*), and valley garter snake (*Thamnophis sirtalis fitchi*).

The northwestern pond turtle (*Actinemys marmorata*), a species that has been proposed for being listed by the federal endangered species act, was observed in the lower pond during the surveys.

The results of these surveys are valid for two years. If construction has not commenced by July 2025 it is recommended that the surveys be conducted again prior to the start of construction.

## 6.0 REFERENCES


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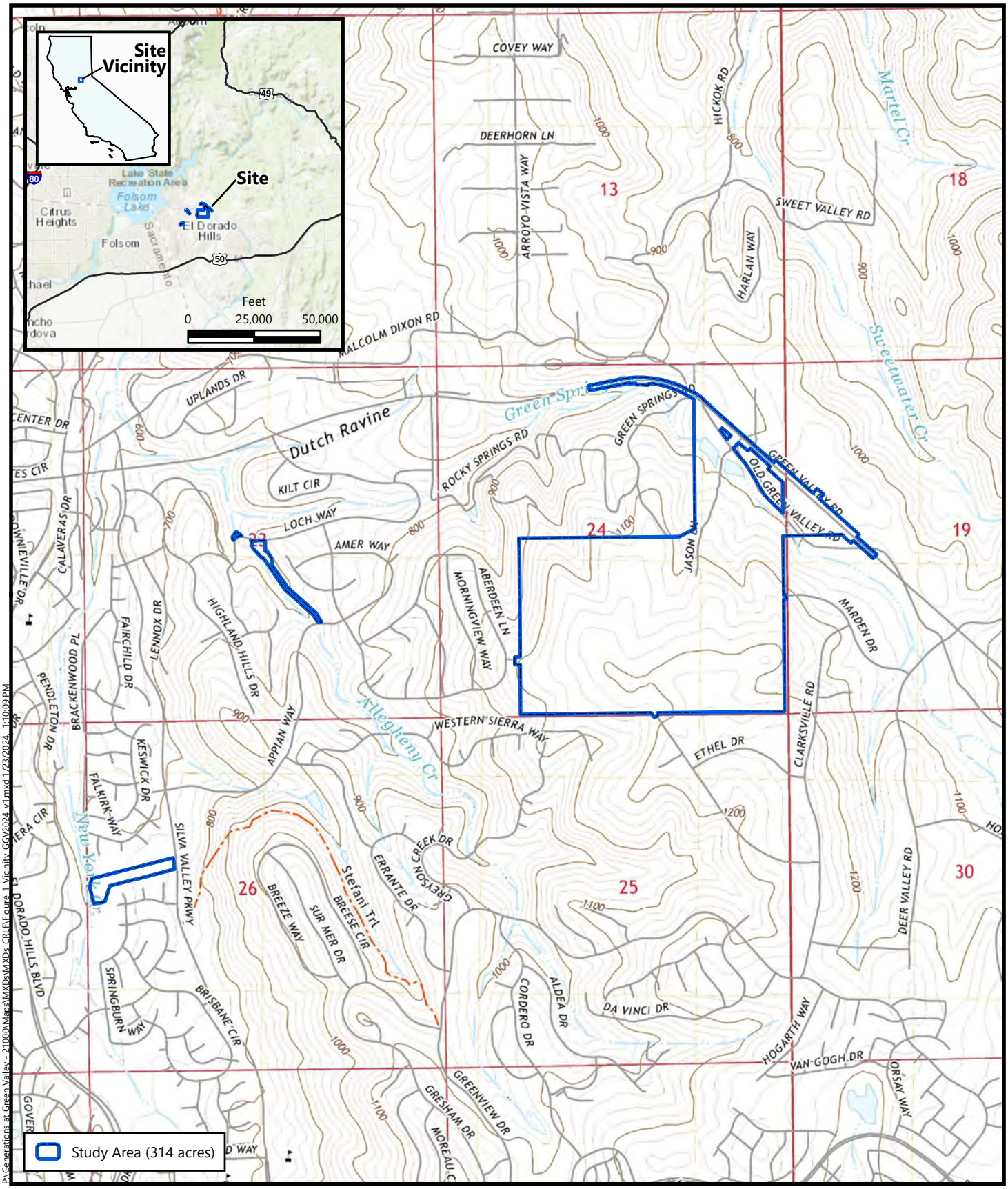
# Figures

Figure 1. Site and Vicinity

Figure 2. California Red-legged Frog Habitat within the Study Area

Figure 3. California Natural Diversity Database Occurrences of California Red-legged Frog and California red-legged Frog Critical Habitat

Figure 4. California Red-Legged Frog Habitat within 1-Mile of the Study Area



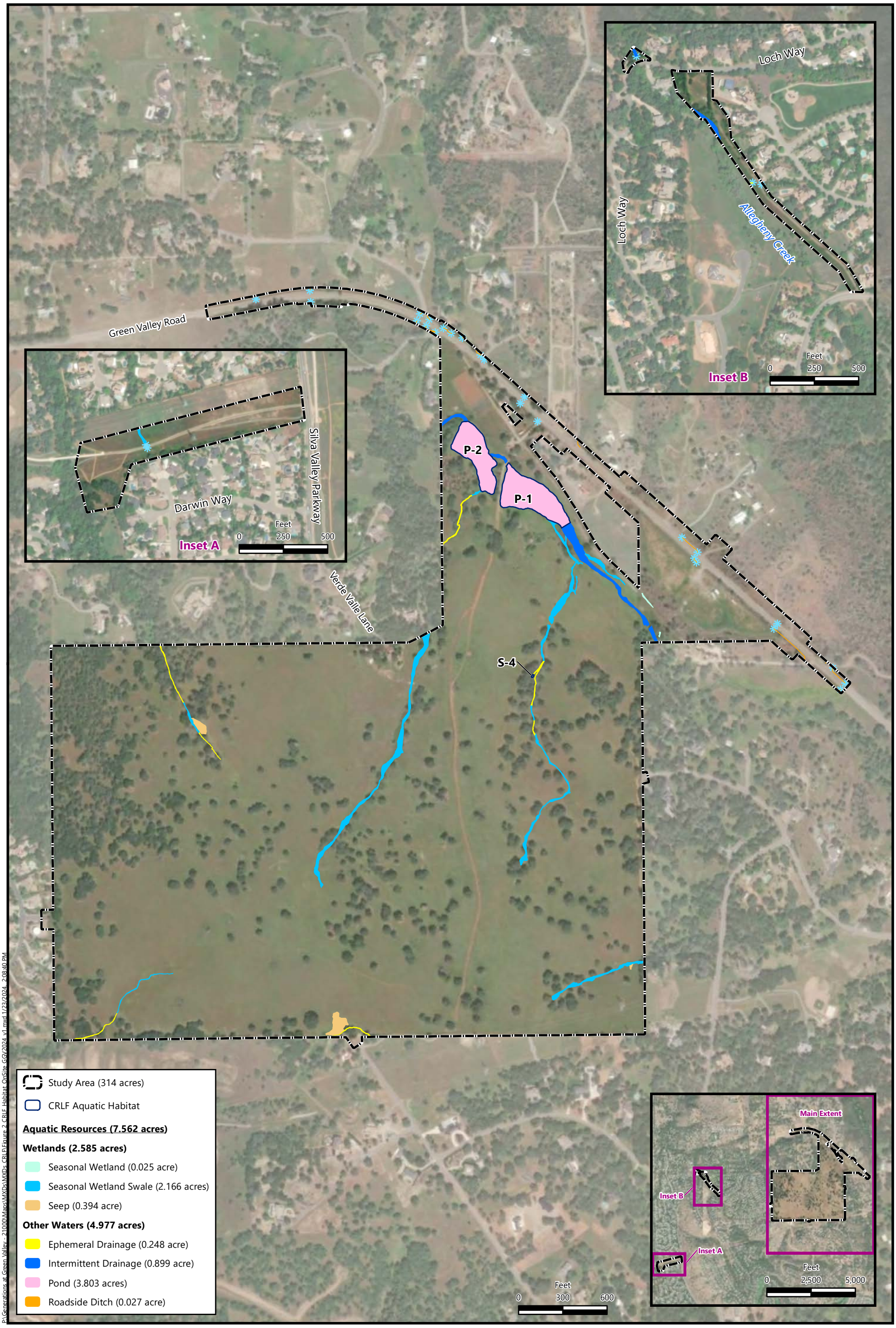

P:\Generations at Green Valley - 21000\Maps\MXDs\MXDs CRL\Figure 1 Vicinity GGV2024_v1.mxd 1/23/2024 1:10:09 PM

Source: United States Geologic Survey, 2021.
"Clarksville, California" 7.5-Minute Topographic Quadrangle
Sections 23-26, Township 10 North, Range 8 East, and
Section 19, Township 10 North, Range 9 East, MDB&M
Latitude 38.703809, Longitude -121.052900

**Figure 1**
**Vicinity Map**

*Generations at Green Valley*
*El Dorado County, California*

MADRONE ECOLOGICAL CONSULTING



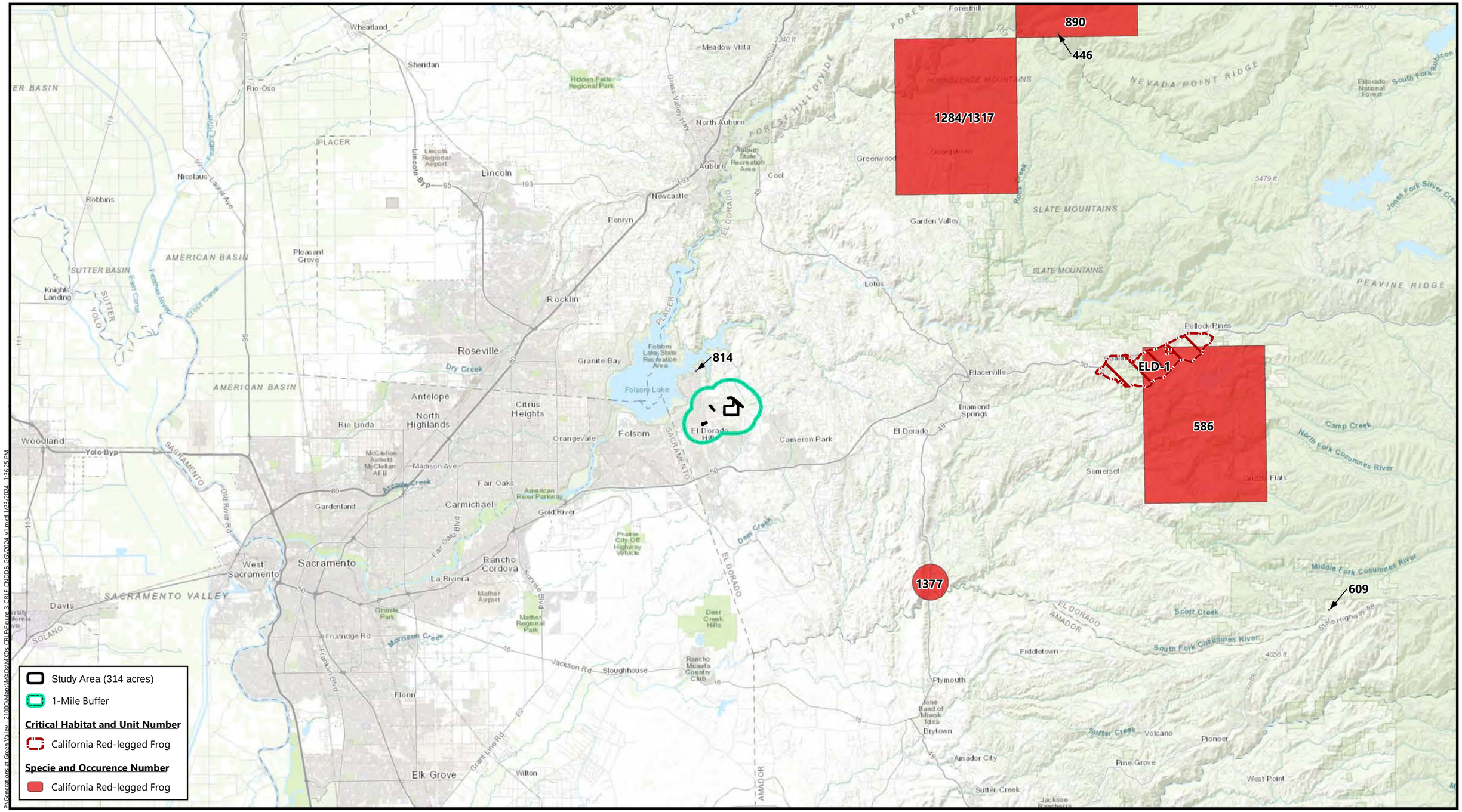

P:\Generations at Green Valley - 21000\Maps\MXDs\MXDs CRLF\Figure 2 CRLF Habitat Onsite GGV2024_v1.mxd 1/25/2024 2:08:40 PM

**Figure 2**
**California Red-legged Frog Habitat within the Study Area**

*Generations at Green Valley*
*El Dorado County, California*

MADRONE ECOLOGICAL CONSULTING

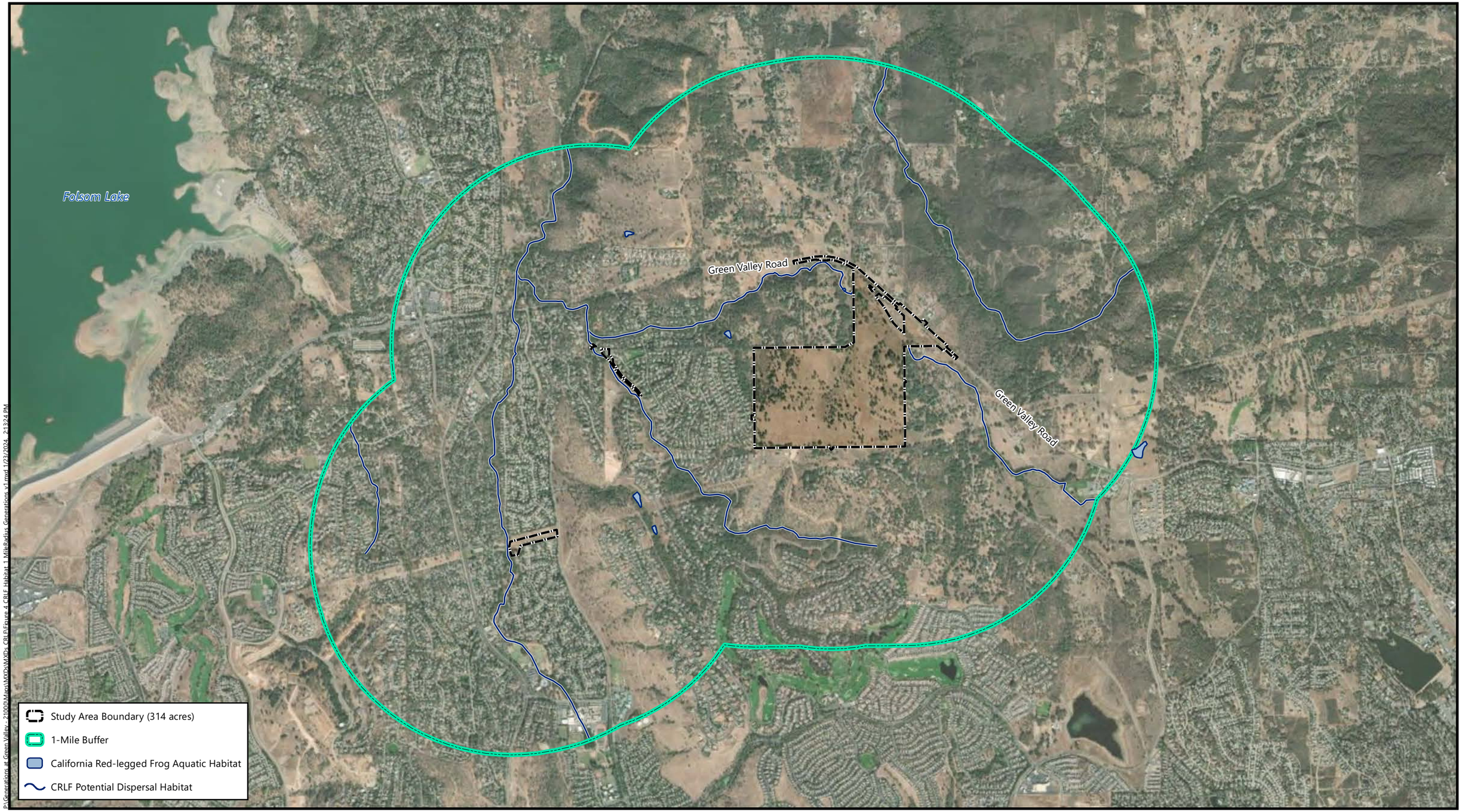
**Aerial Source:** Maxar, 1 May 2022.




**Source:** *California Department of Fish and Wildlife*, January 2024
**Basemap Source:** *National Geographic* and *ESRI*

**Figure 3**
**California Natural Diversity Database Occurrences of California Red-legged Frog and California Red-legged Frog Critical Habitat**
*Generations at Green Valley*
*El Dorado County, California*

MADRONE ECOLOGICAL CONSULTING




P:\Generations at Green Valley - 21000\Maps\MXDs\MXDs CRLF\Figure 4 CRLF Habitat 1 Mile Buffer_Generations_v1.mxd 1/29/2024 2:13:24 PM

**Figure 4**
**California Red-legged Frog Habitat within 1-Mile of the Study Area**

*Generations at Green Valley*
*El Dorado County, California*

**Aerial Source:** Maxar, 1 May 2022

# Attachments

Attachment A:  Qualifications of Surveyor

Attachment B:  Representative Site Photographs

Attachment C:  Habitat Assessment Data Form

Attachment D:  Survey Data Sheets

# Attachment A

**Qualifications of Surveyor**

**Surveyor Qualifications**

**Dustin Brown**

Dustin Brown has more than 14 years of professional experience working as a consultant to both public agencies and the private sector, and has served as biologist for permitting and environmental assessment projects. He has conducted wildlife studies for a variety of terrestrial and aquatic species, including numerous studies involving federally and/or State-listed threatened and endangered wildlife species. Mr. Brown has conducted numerous biological resource investigations, habitat assessments, and jurisdictional wetland delineations for proposed projects. He routinely assesses existing biological resource databases and on-site survey data to evaluate potential impacts to special-status species including federal and/or state listed species, U.S. Forest Service Sensitive species, CNPS listed species, migratory bird species, and regionally sensitive species protected under local ordinances. These assessments often include the development of detailed study plans, developing and implementing literature and field studies, data acquisition, data analysis, impact assessments, mitigation planning, and other environmental documentation.

Mr. Brown has conducted studies and developed permits to meet the regulatory requirements of the federal Clean Water Act (Sections 404 and 401), the federal Endangered Species Act (Section 7 and Section 10), the California State Endangered Species Act (2050-2068, 2081), and the California Fish and Game Code Section 1602 governing activities that may affect fish and wildlife habitats associated with streams and lakes. He has developed several Biological Assessments per the USFWS and NOAA/NMFS guidelines and has worked on a variety of CEQA and NEPA documents including numerous NegDEC's, EIR's, EIS's, and EA's.

## California Tiger Salamander

Mr. Brown was authorized under U.S. Fish and Wildlife Service 10(a)(1)(A) Permits TE-012973 and TE-48210A-1 to independently conduct CTS surveys and has personally conducted approximately 190 hours of CTS sampling and personally handled thousands of CTS larvae and over 89 juvenile and adult CTS

Mr. Brown has conducted protocol-level CTS habitat assessments on over ten properties in Calaveras, San Joaquin, Sacramento, Yolo, Stanislaus, Sonoma, San Benito, and Contra Costa Counties.

## California Red-legged Frog

Mr. Brown was authorized under U.S. Fish and Wildlife Service 10(a)(1)(A) Permits TE-012973 and TE-48210A-1 to independently conduct CRLF surveys and has personally conducted approximately 60 hours of CRLF sampling and personally handled and observed approximately 62 CRLF larvae, 345 metamorph, 105 juveniles, and 45 adult CRLF.

Mr. Brown has conducted protocol-level habitat assessments for CRLF on over 10 properties in Placer, El Dorado, Calaveras, Sacramento, Sonoma, Marin, Monterey, San Ramon, Alameda, and Contra Costa Counties.

# Attachment B

**Representative Site Photographs**




Facing northwest at Pond 1




Facing northwest at Pond 2




Facing southwest at Pond 2




Facing southeast at intermittent drainage (ID-2) that flows into Pond 1 - Potential CRLF Dispersal Habitat




Facing west at intermittent drainage (ID-3) that flows between Pond 1 and Pond 2 – Potential CRLF Dispersal Habitat




Facing east at the upland within the central portion of the Study Area on 5 November 2021




Facing south at Seep S-4 – Potential CRLF Aquatic Habitat




Facing north at Seep S-4 – Potential CRLF Aquatic Habitat



Facing East at Seep S-2 (western portion of the Study Area) on 19 February 2021 – Not suitable CRLF Aquatic Habitat

# Attachment C

**Habitat Assessment Data Form**

**Appendix D.**
**California Red-legged Frog Habitat Site Assessment Data Sheet**

**Site Assessment reviewed by** _____ _____ _____
(FWS Field Office) (date) (biologist)

**Date of Site Assessment:** 11/5/2021
(mm/dd/yyyy)

**Site Assessment Biologists:** Brown (Last name) Dustin (first name) _____ (Last name) _____ (first name)

_____ (Last name) _____ (first name) _____ (Last name) _____ (first name)

**Site Location:** El Dorado, Green Valley Road 1.25 mi. NW of Pleasant Grove middle school
**(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).**

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: Generations at Green Valley
Brief description of proposed action: Residential Development

1) Is this site within the current or historic range of the CRF (circle one)? (YES) NO

2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? YES (NO)
If yes, attach a list of all known CRF records with a map showing all locations.

## GENERAL AQUATIC HABITAT CHARACTERIZATION

*(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)*

**POND:** Pond 1 Pond 2

Size: 500'x200' 450'x160' Maximum depth: Pond 1: 8' Pond 2: 10'

Vegetation: emergent, overhanging, dominant species: See notes below.

Substrate: soil and bedrock (80%/20% respectively)

**Perennial or Ephemeral** *(circle one)*. If ephemeral, date it goes dry: _____

Pond 2 (downstream pond) is perennial and has mosquito fish. Bulrush along 60% of shoreline, Himalayan blackberry along 20% of shoreline. 10% of shoreline is lined with grasses. Surrounding land use includes strawberry farming and rural residential to north and cattle-grazed oak woodland and willow to the south. Depth is >10'.

Pond 1 (upstream pond) - This is a seasonal pond that has a max depth of approx. 8 feet at base flow. Observed evidence of filling to 11' in depth during last heave rains. 30% emergent vegetation (scirpus), blackberry along 20% of shore along dam and SE bank. The rest of the bank is vegetated by grasses.

**Appendix D.**

**California Red-legged Frog Habitat Site Assessment Data Sheet**

This pond is fed by an intermittent drainage that is currently flowing ≈0.5 cfs. No fish or turtles observed in pond. No wading birds observed at this pond (likely no fish present). Water is clear. Surrounding land use is grasslands + oak woodlands that are cattle-grazed.

**STREAM**:

Bank full width: _____

Depth at bank full: _____

Stream gradient: _____

Are there pools (circle one)? YES NO

If yes,

Size of stream pools: _____

Maximum depth of stream pools: _____

Characterize non-pool habitat: run, riffle, glide, other: _____

_____

_____

Vegetation: emergent, overhanging, dominant species: _____

_____

_____

Substrate: _____

_____

Bank description: _____

_____

_____

**Perennial or Ephemeral** *(circle one)*. If ephemeral, date it goes dry: _____

Other aquatic habitat characteristics, species observations, drawings, or comments:

Canada goose, mallard, western meadowlark, Anna's hummingbird, California quail, northern mockingbird, rattlesnake, Ca. towhee, red-winged blackbird, White-crowned sparrow, common gallinule, Wood duck, California scrub jay, Sierran chorus frog (calling in pond), great blue heron (Pond 2).

**Necessary Attachments:**

1. All field notes and other supporting documents
2. Site photographs
3. Maps with important habitat features and species location

# Attachment C

**Survey Data Sheets**

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**Survey results reviewed by** _____ (FWS Field Office) _____ (date) _____ (biologist)

**Date of Survey:** 1/25/23 (mm/dd/yyyy) **Survey Biologist:** Brown (Last name) Dustin (first name)

**Survey Biologist:** _____ (Last name) _____ (first name)

**Site Location:** El Dorado, Generations at Green Valley
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: Generations at Green Valley
Brief description of proposed action: Large - lot residential development

Egg mass survey

**Type of Survey** (circle one): (DAY) NIGHT (BREEDING) NON-BREEDING

**Survey number** (circle one): (1) 2 3 4 5 6 7 8

**Begin Time:** 1220 pm **End Time:** 1455

**Cloud cover:** 0 **Precipitation:** 0

**Air Temperature:** 58-63°F **Water Temperature:** 48

**Wind Speed:** 7-10 mph **Visibility Conditions:** unlimited

**Moon phase:** Waxing Crescent **Humidity:** moderate

**Description of weather conditions:** clear, light wind, mild temp.

**Brand name and model of light used to conduct surveys:** N/A

**Were binoculars used for the surveys** (circle one)? (YES) NO
**Brand, model, and power of binoculars:** Pentax DCF SP 8x43

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

## AMPHIBIAN OBSERVATIONS

| | Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification |
|---|---|---|---|---|---|---|
| upper pond | Pseudacris regilla | ☒ ☐ | Ø | egg masses | – | 100% |
| | " | | H | adult | – | 100% |
| Lower Pond | No amphibians | | | | | |
| Spring Box | No amphibians | | | | | |
| | | | | | | |
| | | | | | | |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: gambusia, bluegill, raccoons, great blue heron, great egret, and double-crested cormorant observed in lower pond.

Other notes, observations, comments, *etc.*

- ~ 0.25 cfs flowing out of spring box
- ~ 2-4 cfs flowing into & out of ponds
- Drift deposits show high flows raised level of upper pond 4' during storms.
- 85% of upper pond shoreline accessable, ~ 15% covered with American blackberry. 70% of lower pond is accessable.
- Gambusia affinis (lower pond)
- Both dams were overtopped (overwhelmed spillways) during January 2023 storms.
- Old irrigation intake pipes in lower pond - irrigate property to north of lower pond
- Upper pond - 8.0 feet deep
- lower pond - full and spilling ~ 5cfs.

Double-crested cormorant in lower pond
Canada goose
Lewis' woodpecker
Acorn woodpecker
Mallard
Black phoebe
Red-winged blackbird
Great blue heron in lower pond
~27 cliff swallow nests under bridge
raccoon prints - lower pond
White-crowned sparrow
Ca. scrub jay
Ca. towhee
Great egret - captured bluegill in lower pond

**Necessary Attachments:**

4. All field notes and other supporting documents
5. Site photographs
6. Maps with important habitat features and species locations

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**Survey results reviewed by** _____ (FWS Field Office) _____ (date) _____ (biologist)

**Date of Survey:** 2/8/2023 (mm/dd/yyyy) **Survey Biologist:** Brown (Last name) Dustin (first name)

**Survey Biologist:** _____ (Last name) _____ (first name)

**Site Location:** El Dorado, South of Green Valley Road and Malcom Dixon Road
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: Generations at Green Valley
Brief description of proposed action: Large Lot Residential

**Type of Survey** (circle one): **DAY** (**NIGHT**) (**BREEDING**) **NON-BREEDING**

**Survey number** (circle one): **1** (**2**) **3** **4** **5** **6** **7** **8**

**Begin Time:** 6:10pm **End Time:** 7:40 pm

**Cloud cover:** 0% **Precipitation:** none

**Air Temperature:** 53°F **Water Temperature:** 57°F

**Wind Speed:** 0-2 mph **Visibility Conditions:** unlimited

**Moon phase:** waning gibbous **Humidity:** 66%

**Description of weather conditions:** Clear, calm, humid

**Brand name and model of light used to conduct surveys:** Nite Light headlamp, Streamlight Strion HPL Spot light

**Were binoculars used for the surveys** (circle one)? (**YES**) **NO**
**Brand, model, and power of binoculars:** Pentax DCF SP 8x43

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**AMPHIBIAN OBSERVATIONS**

| Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification |
|---|---|---|---|---|---|
| upper pond Sierran Chorus frog | 25 | O | Egg masses | - | 100% |
| " | 20+ | O & H | adult | - | " |
| " | " | O & H | " | - | " |
| " | 2 | H | " | - | " |
| | | | | | |
| | | | | | |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: raccoons around upper and lower ponds. Gambusia affinis in lower pond.

Other notes, observations, comments, *etc.*
Ponds are full. Water flowing into and out of ponds at approximately 1 cfs.

**Necessary Attachments:**

4. All field notes and other supporting documents
5. Site photographs
6. Maps with important habitat features and species locations

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**Survey results reviewed by** _____ _____ _____
(FWS Field Office) (date) (biologist)

**Date of Survey:** 2/22/2023 (mm/dd/yyyy) **Survey Biologist:** Brown (Last name) Dustin (first name)

**Survey Biologist:** _____ (Last name) _____ (first name)

**Site Location:** El Dorado County, South of Green Valley Road and Malcom Dixon Road
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: Generations at Green Valley
Brief description of proposed action: Large-lot residential

Egg Mass Survey

**Type of Survey** (circle one): DAY NIGHT BREEDING NON-BREEDING

**Survey number** (circle one): 1 2 (3) 4 5 6 7 8

**Begin Time:** 12:15 pm **End Time:** 2:30 pm

**Cloud cover:** Overcast **Precipitation:** none

**Air Temperature:** 48-50°F **Water Temperature:** 45°F

**Wind Speed:** 3-5mph **Visibility Conditions:** unlimited

**Moon phase:** Waxing Crescent **Humidity:** moderate

**Description of weather conditions:** cool, overcast, there have been several weeks of dry weather, cold front moving in.

**Brand name and model of light used to conduct surveys:** -

**Were binoculars used for the surveys** (circle one)? YES NO
**Brand, model, and power of binoculars:** Pentax DCF SP 8X43

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**AMPHIBIAN OBSERVATIONS**

| | Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification |
|---|---|---|---|---|---|---|
| upper pond | Sierran Chorus frog | 36 | O | egg masses | – | 100% |
| | " | 3 | H | adult | – | 100% |
| Lower Pond | " | 1 | H | adult | – | 100% |
| Spring Box | " | 3-A 2-em | O | Adult + egg masses | – | 100% |
| | | | | | | |
| | | | | | | |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: None in spring box
Upper Pond - None observed.
Lower Pond - gambusia affinis, Lepomis sp., Great egret, great blue heron, and raccoons.

Other notes, observations, comments, *etc.*
Upper Pond 8' deep. Lower pond is full. Flow in creek is ≈ 1-2 cfs.

**Necessary Attachments:**

4. All field notes and other supporting documents
5. Site photographs
6. Maps with important habitat features and species locations

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**Survey results reviewed by** _____ _____ _____
(FWS Field Office) (date) (biologist)

**Date of Survey:** 3/6/2023 (mm/dd/yyyy)

**Survey Biologist:** Brown (Last name) Dustin (first name)

**Survey Biologist:** – (Last name) – (first name)

**Site Location:** _____
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: Generations at Green Valley
Brief description of proposed action: Large lot residential subdivision.

**Type of Survey** (circle one): **DAY** (**NIGHT**) (**BREEDING**) **NON-BREEDING**

**Survey number** (circle one): **1** **2** **3** (**4**) **5** **6** **7** **8**

**Begin Time:** 8:15 pm **End Time:** 10:35 pm

**Cloud cover:** 60% **Precipitation:** none

**Air Temperature:** 48 - 47°F **Water Temperature:** 49°F

**Wind Speed:** 7 mph **Visibility Conditions:** unlimited

**Moon phase:** full **Humidity:** 70%

**Description of weather conditions:** partly cloudy, light breeze, full moon

**Brand name and model of light nsed to conduct surveys:** Nite Light headlamp, Streamlight Strion HPL

**Were binoculars used for the surveys** (circle one)? (**YES**) **NO**
**Brand, model, and power of binoculars:** Pentax DCF SP 8x43

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**AMPHIBIAN OBSERVATIONS**

| | Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification |
|---|---|---|---|---|---|---|
| upper pond | Sierran Chorus frog | 20 | O | egg masses | – | 100 |
| | | 1,000s | O | larvae | – | 100 |
| | " | 6 | O | Adult | – | 100 |
| Lower Pond | " | 3 | O | Adult | – | 100 |
| spring box | " | 1 | O | egg mass | – | 100 |
| | | 2 | H | Adult | – | 100 |
| | | 30 | L | larvae | – | 100 |
| | | | | | | |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: _____

No predators in spring box
Upper Pond - Raccoon
Lower Pond - Raccoon, Gambusia affinis, Lepomis sp., Great egret, great blue heron,

Other notes, observations, comments, *etc.*

Upper pond full - 8' deep
Lower pond full - spilling 1-2 cfs

**Necessary Attachments:**

4. All field notes and other supporting documents
5. Site photographs
6. Maps with important habitat features and species locations

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**Survey results reviewed by** _____ (FWS Field Office) _____ (date) _____ (biologist)

**Date of Survey:** 4/19/2023 (mm/dd/yyyy)

**Survey Biologist:** Brown (Last name) Dustin (first name)

**Survey Biologist:** – (Last name) – (first name)

**Site Location:** El Dorado, Green Valley Road, Generations
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: Generations at Green Valley
Brief description of proposed action: Low-density residential development

**Type of Survey** (circle one): **DAY** (**NIGHT**) (**BREEDING**) **NON-BREEDING**

**Survey number** (circle one): **1** **2** **3** **4** (**5**) **6** **7** **8**

**Begin Time:** 8:50 pm **End Time:** 11:20 pm

**Cloud cover:** 0% **Precipitation:** none

**Air Temperature:** 54°F **Water Temperature:** 53°F

**Wind Speed:** 3-5 mph **Visibility Conditions:** unlimited

**Moon phase:** Waning Crescent **Humidity:** 70%

**Description of weather conditions:** Clear, light breeze

**Brand name and model of light used to conduct surveys:** Streamlight Strion HPL Night Light head lamp

**Were binoculars used for the surveys** (circle one)? (**YES**) **NO**
**Brand, model, and power of binoculars:** Pentax DCF SP 8x43

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**AMPHIBIAN OBSERVATIONS**

| Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification |
|---|---|---|---|---|---|
| Spring Ponds | | | | | |
| Sierra Chorus frog | 55 | O | Larvae | – | 100% |
| Bullfrog | 35 - J<br>12 - A | O + H | Juvnile + adult | | 100 |
| Chorus frog | 100's - L<br>12 - A | O | Larvae, adult | – | 100% |
| Weston Toad | 1 | O | Adult | – | 100% |
| | | | | | |
| | | | | | |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: None in spring box. Ponds have abundant fish (Bass, Lepomis sp., suckers), crayfish, bullfrogs, egrets, herons, racoons, river otters, and garter snakes.

Other notes, observations, comments, *etc.* Ponds are full

GHOW
BAOW
WESO
CATO
MALL
COGA

**Necessary Attachments:**

4. All field notes and other supporting documents
5. Site photographs
6. Maps with important habitat features and species locations

## Appendix E.
## California Red-legged Frog Survey Data Sheet

**Survey results reviewed by** _____ _____ _____
(FWS Field Office) (date) (biologist)

**Date of Survey:** 6/7/2023 (mm/dd/yyyy) **Survey Biologist:** Brown (Last name) Dustin (first name)

**Survey Biologist:** _____ (Last name) _____ (first name)

**Site Location:** El Dorado County, Green Valley Road
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: Generations at Green Valley
Brief description of proposed action: Low-density residential

**Type of Survey** (circle one): **DAY** **(NIGHT)** **(BREEDING)** **NON-BREEDING**

**Survey number** (circle one): **1** **2** **3** **4** **5** **(6)** **7** **8**

**Begin Time:** 9:43 pm **End Time:** 11:57 pm

**Cloud cover:** 100% overcast **Precipitation:** none

**Air Temperature:** 65°F **Water Temperature:** 66°F

**Wind Speed:** 8-10 mph **Visibility Conditions:** unlimited

**Moon phase:** Wanes Gibbous **Humidity:** 65%

**Description of weather conditions:** Overcast, light wind

**Brand name and model of light used to conduct surveys:** Streamlight Stryon HPL Nite Light headlamp

**Were binoculars used for the surveys** (circle one)? **(YES)** **NO**
**Brand, model, and power of binoculars:** Pentax DCF SP 8x43

## Appendix E.
## California Red-legged Frog Survey Data Sheet

### AMPHIBIAN OBSERVATIONS

| | Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification |
|---|---|---|---|---|---|---|
| Spring | Sierran Chorus Frog | ~80 | O | Larvae | – | 100% |
| Upper Pond | Sierran Chorus Frog | 6 | O | Adult | – | 100% |
| | | ~250 | O | larvae | – | 100% |
| | bullfrog | 13-J | O/H | Juvenile | = | 100% |
| | | 6-A | O/H | Adult | | 100% |
| Lower Pond | Sierran Chorus frog | 2-J | O | Juvenile | = | 100% |
| | | 3-A | | Adult | | |
| | bullfrog | 36-J | O | Juvenile | = | 100% |
| | | 19-A | | Adult | | |
| | American toad | 2 | O | Adult | – | 100% |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: None in spring box.

In Ponds: Abundant fish (unidentified suckers?, bass, Lepomis sp., catfish), crayfish, bullfrogs, egrets, herons, raccoons, river otter, garter snake.

Other notes, observations, comments, *etc.*
Upper pond is 8.8' deep. Abundant small fish.

**Necessary Attachments:**

4. All field notes and other supporting documents
5. Site photographs
6. Maps with important habitat features and species locations

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**Survey results reviewed by** _____ (FWS Field Office) (date) (biologist)

**Date of Survey:** 7/5/2023 (mm/dd/yyyy)

**Survey Biologist:** Brown (Last name) Dustin (first name)

**Survey Biologist:** — (Last name) — (first name)

**Site Location:** El Dorado County, Cameron Park, Generations at Green Valley
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: Generations at Green Valley
Brief description of proposed action: Low-density residential development

**Type of Survey** (circle one): (DAY) NIGHT BREEDING (NON-BREEDING)

**Survey number** (circle one): 1 2 3 4 5 6 (7) 8

**Begin Time:** 1200 pm **End Time:** 1510 pm

**Cloud cover:** 0% **Precipitation:** none

Spring - 64°F

**Air Temperature:** 79 - 88°F **Water Temperature:** Pond - 77°F

**Wind Speed:** 5-8 mph **Visibility Conditions:** Unlimited

**Moon phase:** Waning Gibbous **Humidity:** 50%

**Description of weather conditions:** clear, light wind, mild to warm

**Brand name and model of light used to conduct surveys:** —

**Were binoculars used for the surveys** (circle one)? (YES) NO
**Brand, model, and power of binoculars:** Pentax DCF SP 8x43

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**AMPHIBIAN OBSERVATIONS**

| | Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification | |
|---|---|---|---|---|---|---|---|
| in spring box | Pseudacris sierra | ≈ 60 | O | Tadpoles - mature with rear legs | | 100% | |
| upper pond | Pseudacris sierra | ≈ 80 | O | Juvenile - young of year | | 100% | in marshy vegetation D/S of spring |
| | American bullfrog | 1 - L<br>10 - J<br>3 - A | O | Larvae, juvenile, and adult | | 100% | |
| | Pseudacris sierra | ≈100 | O | Juvenile young of the year | | 100% | |
| Lower Pond | American bullfrog | 45 - J<br>8 - A | O | Juvenile and Adult | | 100% | in marshy veg. along pond margins |
| | Pseudacris sierra | ≈ 40 | O | Juvenile | | 100% | " |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: None in spring box. In upper and lower ponds: Abundant fish (lower has large fish bass?), crayfish, bullfrogs, egrets, herons, racoons, river otter, and garter snakes.

Other notes, observations, comments, *etc.*- Upper Pond is 7.8' deep. Has abundant 1-2" long fish (suckers?).
- lower pond is ≈ 1' from overflowing

EUST | AMRO
MALL | SPTO
Canada goose
CAQU | Wild turkey
TUVU | Great-tailed grackle
RSHA
RTHA
KILL
NOMO
RWBL
CLSW
LEGO
HOFI

Western pond turtles in lower pond : two basking on stump

**Necessary Attachments:**

4. All field notes and other supporting documents
5. Site photographs
6. Maps with important habitat features and species locations

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**Survey results reviewed by** _____ _____ _____
(FWS Field Office) (date) (biologist)

**Date of Survey:** 7/5/2023 (mm/dd/yyyy) **Survey Biologist:** Brown (Last name) Dustin (first name)

**Survey Biologist:** — (Last name) — (first name)

**Site Location:** El Dorado, Cameron Park, Generations at Green Valley
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: Generations at Green Valley
Brief description of proposed action: Low-density Residential development

**Type of Survey** (circle one): **DAY** (NIGHT) **BREEDING** (NON-BREEDING)

**Survey number** (circle one): 1 2 3 4 5 6 7 (8)

**Begin Time:** 0950 pm **End Time:** 12:15 AM

**Cloud cover:** 0 **Precipitation:** 0

**Air Temperature:** 74°F **Water Temperature:** spring pond 64°F 76°F

**Wind Speed:** 8mph **Visibility Conditions:** unlimited

**Moon phase:** Waning gibbous **Humidity:** 65%

**Description of weather conditions:** clear, light breeze

**Brand name and model of light used to conduct surveys:** Nite Light Head Lamp Streamlight STrion HPL

**Were binoculars used for the surveys** (circle one)? (YES) NO
**Brand, model, and power of binoculars:** Pentax DCF SP 8x43

**Appendix E.**
**California Red-legged Frog Survey Data Sheet**

**AMPHIBIAN OBSERVATIONS**

| | Species | # of indiv. | Observed (O) Heard (H) | Life Stages | Size Class | Certainty of Identification |
|---|---|---|---|---|---|---|
| Spring Box | Pseudacris sierra | ≥ 50 | O | Larvae | - | 100% |
| | | ≥ 60 | O | Juvenile | - | 100% |
| Upper Pond | Bullfrog | 10 - L<br>30 - J<br>10 - A | O+H | all stages | - | 100% |
| | Sierran chorus frog | ≥ 40 | O | juvenile | - | 100% |
| Lower Pond | bullfrog | 50 - J<br>15 - A | O | juvenile & adult | - | 100% |
| | sierran chorus frog | 25 | O | juvenile | - | 100 |
| | | | | | | |

Describe potential threats to California red-legged frogs observed, including non-native and native predators such as fish, bullfrogs, and raccoons: None in spring box. In ponds: Bass, sunfish (Lepomis sp.), swamp crayfish, bullfrogs, egrets, heron, racoon, river otter, and garter snake.

Other notes, observations, comments, *etc.*

- Spring is clear and flowing slowly. Larvae Sierran chorus frogs in the process of metamorphosing.
- Abundant fish in ponds.

Racoon, western screech owl, Belted Kingfisher, barn owl, Ca. towhee

**Necessary Attachments:**

4. All field notes and other supporting documents
5. Site photographs
6. Maps with important habitat features and species locations

MADRONE ECOLOGICAL CONSULTING

8421 Auburn Blvd., Suite 248
Citrus Heights, CA 95610
www.madroneeco.com
(916) 822-3230

8 April 2024

Regulatory Project Manager
California South Branch, Regulatory Division
U.S. Army Corps of Engineers, Sacramento District
1325 J Street, Room 1350
Sacramento, California 95814

**Subject: Request for Approved Jurisdictional Determination for the Generations at Green Valley Project in El Dorado County, California (SPK 2011-00758)**

Dear Sir or Madam,

The Generations at Green Valley Project site was originally delineated by Gibson & Skordal, LLC (G&S) under the project name of Dixon Ranch (SPK 2011-00758). The U.S. Army Corps of Engineers (USACE) issued a Preliminary Jurisdictional Determination (PJD) for the G&S wetland delineation for Dixon Ranch on 26 August 2011. This PJD, including the associated map, is included as **Attachment A**. Since 2011, the proposed project has been revised and been renamed, the project applicant has changed, and the project boundaries have changed. These new project boundaries now include expected off-site infrastructure improvements. We prepared a package to summarize some of these changes, and requested a combined PJD and Approved Jurisdictional Determination (AJD) for the revised area in August 2022; this map was not verified. Since that submittal, the definition of Waters of the U.S. has changed, and offsite infrastructure improvement areas have been added to the Study Area. As a result, we have prepared this revised package, and are requesting an AJD of the entire Study Area, as shown on **Attachment B**. An AJD request form, including the revised applicant information is included as **Attachment C**. Preparation of this package involved both surveys of the new portions of the Study Area (which are discussed below), as well as surveys throughout the previously verified portions of the Study Area to document any changes that may have occurred in the intervening time. These surveys were conducted by Senior Biologist Daria Snider and Biologist Matt Shaffer on 26 April, 7 and 24 May, and 9 June 2021 and 5 January 2024.

**Changes to Project Boundaries**

The project site is located at Green Valley Road in El Dorado County (**Figure 1**). The majority of the main project site has remained the same; however, the following modifications have been made:

- small slivers of additional area were added along the southern and eastern boundaries to reflect the surveyed parcel boundaries,
- a few small parcels along Green Valley Road were removed from the Project,
- several areas along either side of Green Valley Road have been added in anticipation of required road improvements;
- small areas along the western, southern, and eastern boundaries were added to allow the Project's internal circulation to tie into surrounding roadways; and
- areas were added just west of Silva Valley Parkway and between Loch Way and Appian Way for wastewater connections.

The exhibit provided in **Attachment D** shows the original verified boundary in comparison to the current Project Boundary. Soils found within the study area are shown on **Figure 2**.

**Changes to Land Use within the Project Area**

Since 2011, the land use within the vast majority of the Project Area has remained unchanged. Surveys conducted by Ms. Snider throughout the site indicated that the previously mapped aquatic resources were very consistent with current conditions. Hydrology changes upstream of the Project site on Green Springs Creek have resulted in a shorter duration of inundation for the ponds, but the extent of inundation remains the same. The only changes observed by Ms. Snider were in the northeastern-most parcels, where an active berry farm and associated fruit stand have been abandoned, and a large amount of grading occurred in the general vicinity. The grading did not leave the ground entirely flat, and some hydrophytic vegetation has established in some of the lower areas. However, three parameter data were collected in representative depressions, and hydric soils and wetland hydrology indicators were not found. As a result, these areas appear to be mesic areas in winter, and no aquatic resources were added to the map in these locations. One small depressional seasonal wetland was added to the delineation along an abandoned dirt road, and a seasonal wetland swale just to the northwest (SW1) was reclassified to a depressional seasonal wetland. In addition, wetland types were adjusted to match nomenclature that Madrone typically uses for aquatic resources delineations. All of these modifications are reflected in the aquatic resources delineation map included in **Attachment B**.

**Extent of USACE Jurisdiction**

The extent of USACE jurisdiction has fluctuated substantially in the past several years; however, the current definition of Waters of the U.S. is defined in the "Revised Definition of 'Waters of the United States'; Conforming," (Conforming Rule) which was published in the Federal Register and became effective on September 8, 2023. No interpreting guidance has been issued for the Conforming Rule, so we have interpreted it based on our professional experience. As we interpret this rule, the intermittent drainages Green Spring Creek and Alleghany Creek are Relatively Permanent Waters under paragraph (a)(3) of the Conforming Rule, and the ponds along Green Spring Creek are impoundments of otherwise jurisdictional waters under paragraph (a)(2) of the Conforming Rule. The ephemeral drainages are not relatively permanent and therefore are not subject to USACE jurisdiction. However, they still provide a "continuous surface connection" between the seasonal wetland swales and seeps that are interspersed along their length and the jurisdictional (a)(2) and (a)(3) waters. As a result, the seeps and seasonal wetlands are jurisdictional under paragraph (a)(4)(ii) of the Conforming Rule. The depressional seasonal wetlands and SWS-11 lack a continuous surface connection and are not jurisdictional. Additionally, most of the roadside ditches, which were constructed in uplands during road construction, are exempt from jurisdiction under paragraph (b)(3) of the Conforming Rule. Four roadside ditch segments (RD-6, RD-7, RD-8, and RD-9) appear to be a re-routed stream channel; however, their flow is ephemeral. As the flow duration for these four roadside ditch segments is not "relatively permanent," they are not subject to USACE jurisdiction. All of these jurisdictional categories have been noted in the ORM spreadsheet that is being attached to this digital submittal.

**Update to Project Applicant Information**

The project applicant has changed since the PJD was issued in 2011. Please update your records as follows:

Mr. Aiden Barry
Green Valley Road Benefits, LLC
110 Blue Ravine Road, Suite 103
Folsom, California 95630
(916) 945-9719
ABarry@thetruelifecompanies.com

In summary, we are requesting an Approved Jurisdictional Determination for the map included as **Attachment B**. An ORM spreadsheet and GIS shapefiles are being transmitted to you digitally with this letter, and a JD Request Form is included as **Attachment C**. If you have any questions or require additional information, please contact me at (916) 822-3230, or at gfodge@madroneeco.com.

Sincerely,

Ginger E. Fodge
Principal

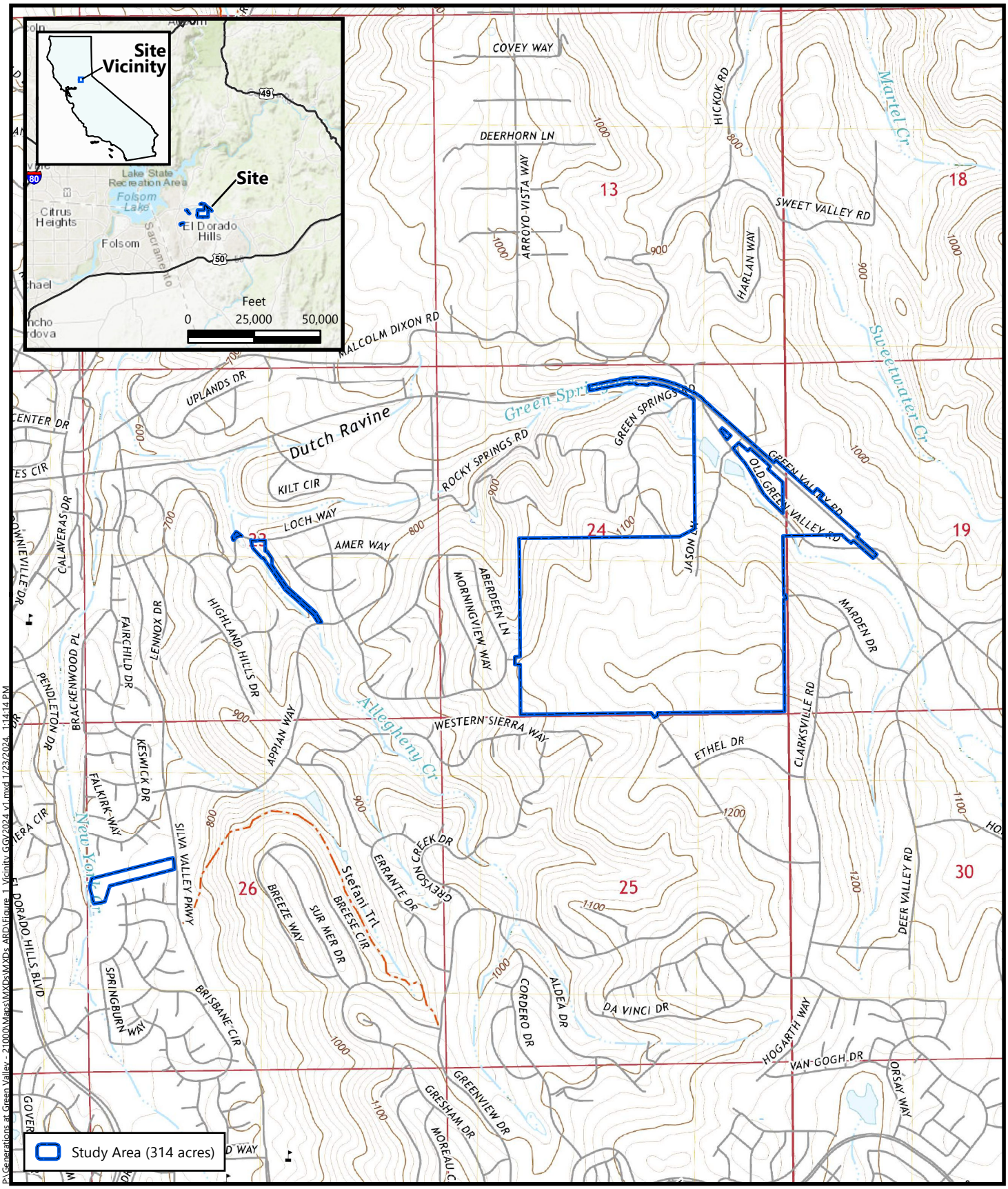
Attachments

cc: Mr. Aidan Barry
Green Valley Road Benefits, LLC
110 Blue Ravine Road, Suite 103
Folsom CA 95630

# Figures

Figure 1:  Site and Vicinity

Figure 2: Soils



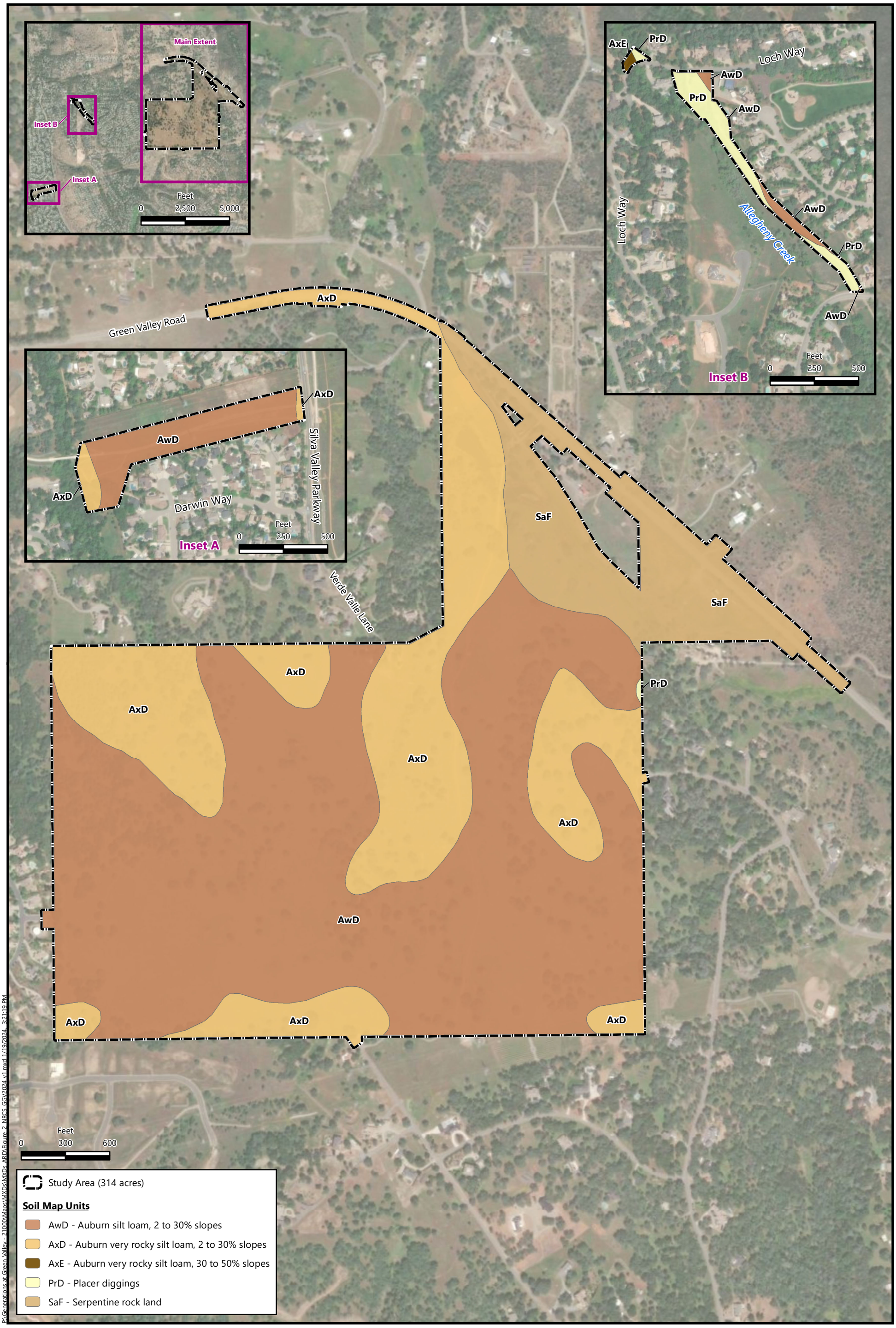

P:\Generations at Green Valley - 21000\Maps\MXDs\MXDs ARD\Figure 1_Vicinity GGV2024 v1.mxd 1/23/2024 1:14:14 PM

Source: United States Geologic Survey, 2021.
"Clarksville, California" 7.5-Minute Topographic Quadrangle
Sections 23-26, Township 10 North, Range 8 East, and
Section 19, Township 10 North, Range 9 East, MDB&M
Latitude 38.703809, Longitude -121.052900

**Figure 1**
**Site and Vicinity**

*Generations at Green Valley*
*El Dorado County, California*

MADRONE ECOLOGICAL CONSULTING




N

**Figure 2**
**Natural Resources Conservation Service Soils**

*Generations at Green Valley*
*El Dorado County, California*

MADRONE ECOLOGICAL CONSULTING

**Soil Survey Source:** *USDA, Soil Conservation Service. Soil Survey Geographic (SSURGO) database for El Dorado Area, California*
**Aerial Source:** Maxar, 1 May 2022.

# Attachments

Attachment A:  Preliminary Jurisdictional Determination for Dixon Ranch (SPK 2011-00758)

Attachment B:  Aquatic Resources Delineation Map for Generations at Green Valley

Attachment C:  JD Request Form

Attachment D:  Comparison of Dixon Ranch PJD Study Area to Current Study Area

# Attachment A

**Preliminary Jurisdictional Determination**
**for Dixon Ranch (SPK 2011-00758)**

# Attachment B

**Aquatic Resources Delineation Map**
**for Generations at Green Valley**

# Attachment C

**JD Request Form**

# Attachment D

**Comparison of Dixon Ranch PJD Study Area**
**to Current Study Area**

# Memo

To: Jaren Nuzman

From: Ginger Fodge, Principal

Date: 14 May 2024

Subject: Preliminary Biological Resource Evaluation of a Potential Generations at Green Valley Sewer Line Alignment along Silva Valley Parkway

At your request, Madrone Ecological Consulting, LLC (Madrone) has completed a preliminary biological resource evaluation of a potential sewer line alignment along Silva Valley Parkway in the unincorporated community of El Dorado Hills, El Dorado County, California (**Figure 1**). The potential alignment is being considered as an alternative route for a sewer line associated with the Generations at Green Valley Project. This memorandum refers to the potential sewer line alignment as the Silva Valley Parkway Study Area.

**Survey Methodology**

Madrone Senior Biologist Daria Snider surveyed the approximately 10.2-acre Silva Valley Parkway Study Area (**Figure 2**) on 25 April 2024. The purpose of the survey was to identify and map potential waters of the U.S. and/or State of California, conduct a special-status plant survey for any plants that have potential to occur within the Study Area, and to assess the potential for the Study Area to provide habitat for special-status species.

A list of special-status species with potential to occur within the Study Area was developed by conducting a query of the following databases:

- California Natural Diversity Database (CNDDB) (CNDDB 2022 and 2024) queries of the "*Clarksville, California*" USGS 7.5-minute quadrangle and the eight surrounding quadrangles (searched using the nine quadrangle names);
- USFWS Information for Planning and Conservation (IPaC) (USFWS 2022) query for the Study Area;
- California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (CNPS 2022 and 2024) query of the "*Clarksville, California*" USGS topo quadrangle, and the eight surrounding quadrangles;
- Verified records from Bumble Bee Watch (BBW 2024);
- Queries of the Western Monarch Milkweed Mapper (WMMM 2024) and Western Monarch Overwintering Site Viewer (Xerxes Society 2024) databases;
- Research grade observations from iNaturalist (iNaturalist 2024);
- Western Bat Working Group (WBWG) Species Matrix (WBWG 2022); and
- Cornell Laboratory of Ornithology's eBird database (Cornell Laboratory of Ornithology 2022 and 2024a).

In addition, any special-status species that are known to occur in the region, but that were not identified in any of the above database searches and/or were requested for consideration by El Dorado County, were also analyzed for their potential to occur within the overall Study Area.

**Results**

The study area consists of the developed Silva Valley Parkway, the unvegetated road shoulder on its east side, a roadside ditch adjacent to the eastern edge of the shoulder throughout much of the Study Area, and a nonnative annual brome grassland slope extending from the ditch eastward uphill to the adjacent bike trail. Two intermittent drainages flow from east to west through the Study Area. The Rolling Hills Middle School property boundary and the western edge of an existing bike trail form the eastern study area boundary. A few scattered trees occur within this grassland area including tallow tree (*Triadica sebifera*), Callery pear (*Pyrus calleryana*), and Valley oak (*Quercus lobata*).

Aquatic resources mapped within the Study Area are summarized in **Table 1**, and shown on **Figure 3**. These features would likely be considered waters of the U.S. and/or State.

**Table 1. Aquatic Resources in the Silva Valley Parkway Study Area**

| Aquatic Resource Type | Amount in Study Area (acres) |
|---|---|
| *Wetlands* | |
| Seasonal Wetland Swale | 0.05 |
| Wetland Ditch | 0.01 |
| ***Total Wetlands*** | ***0.06*** |
| *Other Waters* | |
| Intermittent Drainage | <0.01 |
| Roadside Ditch | 0.13 |
| ***Total Other Waters*** | ***0.14*** |
| **GRAND TOTAL** | **0.20** |

Terrestrial Vegetation Communities and Land Cover were mapped within the Study Area, as summarized in **Table 2** and shown on **Figure 3**. Terrestrial Land Cover types include Urban (the paved section of Silva Valley Parkway and adjacent sidewalks and irrigated landscaping), Disturbed (the unvegetated shoulders of Silva Valley Parkway and the bike path), and Annual Brome Grassland.

**Table 2. Terrestrial Vegetation Communities and Land Cover in the Silva Valley Parkway Study Area**

| Community Type | Amount in Study Area (acres) |
|---|---|
| Annual Brome Grassland | 2.0 |
| Disturbed | 2.1 |
| Urban | 5.9 |
| **TOTAL** | **10.0** |

The habitats within the Study Area have the potential to support the following special-status species:

- Big-scale balsamroot (*Balsamorhiza macrolepis*, CRPR List 1B.2) – annual brome grassland
- Dwarf downingia (*Downingia pusilla*, CRPR List 2B.2) – wetland ditch and seasonal wetland swale
- Tuolumne button celery (*Eryngium pinnatisectum*, CRPR List 1B.2) – wetland ditch and seasonal wetland swale
- Pincushion navarretia (*Navarretia myersii ssp mysersii*, CRPR List 1B.1) – wetland ditch and seasonal wetland swale
- Sanford's arrowhead (*Sagittaria sanfordii*, CRPR List 1B.2) – intermittent drainage
- Crotch's bumblebee (*Bombus crotchii*, California candidate for listing) – annual brome grassland
- Monarch butterfly (*Danaus plexippus*, federal candidate for listing) – annual brome grassland
- Blainville's horned lizard (*Phrynosoma blainvillii*, California Species of Special Concern) – sandy road shoulders
- Tricolored blackbird (*Agelaius tricolor,* California Threatened and Species of Special Concern) (foraging) – annual brome grassland
- Grasshopper sparrow (*Ammodramus savannarum,* California Species of Special Concern) – annual brome grassland
- Golden eagle (*Aquila chrysaetos,* California Fully Protected Species) (foraging) – annual brome grassland
- Burrowing owl (*Athene cunicularia,* California Species of Special Concern) (wintering) – annual brome grassland
- White-tailed kite (*Elanus leucurus,* California Fully Protected Species) (nesting and foraging) – annual brome grassland
- Loggerhead shrike (*Lanius ludovicianus,* California Species of Special Concern) (nesting and foraging) – annual brome grassland
- Pallid bat (*Antrozous pallidus*, California Species of Special Concern, Western Bat Working Group High Threat Rank)- trees

The survey was conducted at the appropriate time of year to document big-scale balsamroot, dwarf downingia, and pincushion navarretia, if they were present. None of these species were detected during the survey, and they are presumed to be absent from the Study Area. The survey was conducted outside of the identifiable season for Tuolumne button celery and Sanford's arrowhead; therefore, a follow-up survey will be conducted during the summer months to search for these species and determine their presence or absence within the Study Area.

The CNDDB does not show any occurrences of special-status species within the Study Area. The CNDDB shows a 2012 record for northwestern pond turtle (*Actinemys marmorata*), which is proposed for listing as threatened under the federal Endangered Species Act and is a California species of special concern, approximately 0.8 mile to the south; this occurrence was recorded in a drainage along Silva Valley Parkway (Buck's Creek) south of Serrano Parkway and north of U.S. Highway 50. The drainage within which this occurrence was recorded does not extend into the Study Area.

**Potential Impacts to Sensitive Biological Resources and Recommended Mitigation**

No design has been developed to date for impacts within the Study Area; therefore, impacts to sensitive biological resources and Land Cover types are analyzed at a programmatic level, and we have provided recommended measures to minimize and mitigate any significant adverse impacts. These measures are consistent with those identified in the *Biological Resources Assessment for Generations at Green Valley, April 2024*, prepared for Green Valley Road Benefits, LLC, by Madrone Ecological Consulting, LLC.

***Aquatic Resources***

Up to 0.20 acre of aquatic resources could be impacted, including seasonal wetland swale, wetland ditches, roadside ditches, and intermittent drainages, as identified in **Table 3**.

**Table 3. Maximum Aquatic Resource Impacts in the Silva Valley Parkway Study Area**

| Resource Type | Amount in Study Area (acres) | Potential Maximum Impact (acres)[1] |
|---|---|---|
| *Wetlands* | | |
| Seasonal Wetland Swale | 0.05 | 0.05 |
| Wetland Ditch | 0.01 | 0.01 |
| ***Total Wetlands*** | ***0.06*** | ***0.06*** |
| *Other Waters* | | |
| Intermittent Drainage | <0.01 | <0.01 |
| Roadside Ditch | 0.13 | 0.13 |
| ***Total Other Waters*** | ***0.14*** | ***0.14*** |
| **GRAND TOTAL** | **0.20** | **0.20** |

*Summation errors may occur due to rounding.*

[1] Pending final design, it is anticipated that the Project can be designed to avoid permanent impacts to some or all of the aquatic resources. As such, the actual impact total is expected to be lower than that shown on the Grand Total line.

To mitigate for expected impacts to aquatic resources, we recommend the following measures:

1. The Project proponent shall apply for a Section 404 permit from the U.S. Army Corps of Engineers for activity that would waters of the U.S. Waters of the U.S. that will be impacted shall be replaced or rehabilitated on a "no-net-loss" basis. Compensatory mitigation in the form of habitat restoration, rehabilitation, and/or replacement shall be at a location and by methods acceptable to the USACE.
2. The Project proponent shall apply for a Section 401 water quality certification from and/or submit a Report of Waste Discharge to the RWQCB and adhere to the certification conditions/WDRs.

Additionally, in the event the intermittent drainage would be temporarily or permanently impacted by the work, the Project proponent shall notify the CDFW consistent with the requirements of Fish and Game Code Section 1600 (Lake or Streambed Alteration) and abide by the conditions of any LSAA issued by CDFW.

***Sensitive Terrestrial Vegetation Communities***

The Study Area's only natural terrestrial vegetation community is Annual Brome Grassland. The other land cover types that could potentially be impacted by the Project included paved areas, landscaping, and the unvegetated road and bike path shoulders as summarized in **Table 4.** None of these communities are considered Sensitive by CDFW; therefore, no impacts to sensitive natural communities are expected.

**Table 4.** ***Maximum Terrestrial Vegetation Community Impacts in the Silva Valley Parkway Study Area***

| Community Type | Amount in Off-Site Study Areas (acres)[1] | Potential Maximum Impacts (acres)[2] |
|---|---|---|
| Annual Brome Grassland | 2.0 | 2.0 |
| Disturbed | 2.1 | 2.0 |
| Urban | 5.9 | 5.9 |
| **TOTAL** | **10.0** | **10.0** |

*Summation errors may occur due to rounding.*

[1] Total amounts in Study Area do not include aquatic resources listed in **Table 3**.

[2] The actual impact total is expected to be lower than that shown on the Grand Total line.

Although Annual Brome Grassland is not considered to be a sensitive vegetation community, individual Valley oak trees were identified within the Annual Brome Grassland. It is possible that impacts to these trees may occur, depending on final design of the sewer line alignment. To compensate for the loss of oak resources, we expect the County to require compliance with the following measures, which are derived from the County's Oak Resources Conservation Ordinance:

1. The Project proponent shall complete an Oak Resources Technical Report as required by Chapter 130.39 of the El Dorado County Code. The report shall summarize the oak woodlands within the Study Area, and document the number, size, species, and condition of all native oak trees outside of mapped oak woodlands with a single main trunk measuring greater than six inches in diameter at breast height (DBH) or with a multiple trunk having an aggregate trunk diameter measuring greater than ten inches DBH. The report shall identify all individual native oak trees greater than DBH 24 inches and less than DBH 36 inches occurring within the oak woodlands and all heritage native oak trees (DBH 36 inches and greater) present, including any occurring within the oak woodlands. The report shall identify mitigation at a 1:1 ratio (the ratio used for oak woodland impacts up to 50% per the El Dorado County Oak Resources Management Plan [El Dorado County 2017]) by one of the following methods:
    a) In-lieu fee payment based on the percent of on-site Oak Woodland impacted by the development as shown in Table 5 (Oak Woodland In-Lieu Fee) in the ORMP to be either used by the County to acquire off-site deed restrictions and/or conservation easements or to be given by the County to a land conservation organization to acquire off-site deed restrictions and/or conservation easements;
    b) Off-site deed restriction or conservation easement acquisition for purposes of off-site oak woodland conservation consistent with Chapter 4.0 (Priority Conservation Areas) of the ORMP;

c) Replacement planting within an area on-site for up to 50 percent of the total oak woodland mitigation requirement consistent with Section 2.4 (Replacement Planting Guidelines) of the ORMP. This area shall be subject to a Deed Restriction or Conservation Easement
d) Replacement planting within an area off-site for up to 50 percent of the total oak woodland mitigation requirement. Off-site replacement planting areas shall be consistent with Section 2.4 (Replacement Planting Guidelines) and Chapter 4.0 (Priority Conservation Areas) of the ORMP. This area shall be subject to a Deed Restriction or Conservation Easement; or
e) A combination of options a through d above.

2. The Project proponent shall submit an Oak Woodland Removal Permit application consistent with Chapter 130.39 of the El Dorado County Code and El Dorado County Oak Resources Management Plan (El Dorado County 2017).
3. The Project proponent shall implement all requirements of the Oak Woodland Removal Permit issued by El Dorado County and provide documentation showing fulfillment of the 1:1 mitigation requirement.
4. Because the Project would retain areas of oak woodland in the Study Area, a bond or other security instrument as described in El Dorado County Code Section 130.39.070 would be required. The bond or other security instrument shall be required as a condition of issuance of the discretionary permit and/or authorization to protect oak woodlands identified for preservation during the construction period. The form and amount of the security instrument shall be specified by the permit issuing body and approved by County Counsel. No grading or other on-site work shall be permitted until the security is posted.
5. If oak tree replacement planting is proposed for the Project, the Project proponent shall post a bond or other security instrument in an amount equal to the current value of required replacement tree(s) and/or acorns, plus the cost of maintenance and monitoring, as determined by a Qualified Professional (as described in El Dorado County Code Section 130.39.070). No grading or other on-site work shall be permitted until the security is posted.

***Special-Status Plants***

The early-season (April 2024) special-status plant survey conducted for the the Study Area was negative, but the late-season survey will need to be conducted during the summer months. If no special-status plant species are found during the 2024 surveys of off-site areas no relocation would be required. If special-status plants are found during any of the surveys and will be impacted, mitigation for those impacts will be determined during consultation with the County. If the plant found is a perennial, then mitigation could consist of digging up the plant and transplanting into a suitable avoided area on-site prior to construction. If the plant found is an annual, then mitigation could consist of collecting seed-bearing soil and spreading into a suitable avoided area on-site prior to construction.

***Crotch Bumble Bee***

The Study Area supports suitable nesting and foraging habitat for Crotch bumble bee. As such, we recommend the following measures:

Crotch bumble bee was designated as a candidate for listing under the CESA in 2019, but no decision on listing has been published. If, at the time of project implementation, the species is not a CESA candidate or CESA listed, and it does not fall into any of other special-status categories, then it would not qualify for protections under CEQA and no mitigation is necessary. Furthermore, because Crotch bumble bee is a candidate species, appropriate mitigation measures are still being developed and refined. Madrone has developed the following measure based on current literature and research, including CDFW's *Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species* (CDFW 2023b). If at a later date a different mitigation measure is determined to be more appropriate, that measure can be submitted to the County at that time for review and approval.

- Initial ground-disturbing work (e.g., grading, vegetation removal, staging) shall take place between 1 September and 31 March (i.e., outside the colony active period), if feasible, to avoid impacts on Crotch bumble bee.
- If completing all initial ground-disturbing work between 1 September and 31 March is not feasible, then a senior biologist with 10 or more years of experience conducting biological resource surveys within California shall conduct a pre-construction survey for Crotch bumble bee in the area proposed for impact no more than 14 days prior to the commencement of construction activities. The survey shall occur during the period from one hour after sunrise to two hours before sunset, with temperatures between 65° F and 90° F, with low wind and no rain. If the timing of the start of construction makes the survey infeasible due to the temperature requirements, the surveying biologist shall select the most appropriate days based on the National Weather Service seven-day forecast and shall survey at a time of day that is closest to the temperature range stated above. The survey duration shall be commensurate with the extent of suitable floral resources (which represent foraging habitat) present within the area proposed for impact and the level of effort shall be based on the metric of a minimum of one person-hour of searching per three acres of suitable floral resources/foraging habitat. A meandering pedestrian survey shall be conducted throughout the area proposed for impact in order to identify patches of suitable floral resources. Suitable floral resources for Crotch bumble bee include species in the following families: Apocynaceae, Asteraceae, Boraginaceae, Fabaceae, and Lamiaceae.
- At a minimum, pre-construction survey methods shall include the following:
    - Search areas with floral resources for foraging bumble bees. Observed foraging activity may indicate a nest is nearby, and therefore, the survey duration shall be increased when foraging bumble bees are present.
    - If bumble bees are observed, attempt to photograph the individual and identify it to species.
    - If Crotch bumble bee is observed, watch any Crotch bumble bees present and observe their flight patterns. Attempt to track their movements between foraging areas and the nest.
    - Visually look for nest entrances. Observe burrows, any other underground cavities, logs, or other possible nesting habitat.
    - If floral resources or other vegetation preclude observance of the nest, small areas of vegetation may be removed via hand removal, line trimming, or mowing to a height of no less than 4 inches to assist with locating the nest.

  - Look for concentrated Crotch bumble bee activity.
  - Listen for the humming of a nest colony.
- The biologist conducting the survey shall record when the survey was conducted, a general description of any suitable foraging habitat/floral resources present, a description of observed bumble bee activity, a list of bumble bee species observed, a description of any vegetation removed to facilitate the survey, and their determination of if survey observations suggest a Crotch bumble bee nest(s) may be present or if construction activities could result in take of Crotch bumble bees. The report shall be submitted to the County prior to the commencement of construction activities.
- If no bumble bees are located during the pre-construction survey or the bumble bees located are definitively identified as common (i.e., not special-status) species, then no further mitigation or coordination with CDFW is required.
- If any sign(s) of a bumble bee nest is observed, and if it cannot be established the species present is not a Crotch bumble bee, then construction shall not commence until either 1) the bumble bees present are positively identification as common (i.e., not special status) by an experienced bumble bee taxonomist, or 2) the completion of coordination with CDFW to identify appropriate mitigation measures, which may include but not be limited to: waiting until the colony active season ends, establishment of nest buffers, or obtaining an Incidental Take Permit (ITP) from CDFW.
- It is recommended, but not required that the Project Applicant also survey the proposed impact areas the year before construction begins in order to avoid potential last-minute delays associated with identifying Crotch bumble bees on-site immediately prior to construction activities. To be most effective, this optional survey should follow the protocol outlined above.
- If Crotch bumble bees are located, and after coordination with CDFW take of Crotch bumble bees cannot be avoided, the Applicant shall obtain an ITP from CDFW prior to County approval of permits authorizing construction, and the Applicant shall implement all conditions identified in the ITP. Mitigation required by the ITP may include but will not be limited to, the Project Applicant translocating nesting substrate in accordance with the latest scientific research to another suitable location (i.e., a location that supports similar or better floral resources as the impact area), enhancing floral resources on areas of the Project site that will remain appropriate habitat, worker awareness training, and/or other measures specified by CDFW.

***Monarch***

This species could be adversely affected if construction activity results in the removal of milkweed plants being actively utilized by monarch (either supporting eggs or feeding caterpillars) at the time of construction.

To mitigate for potential impacts to monarch, we recommend the following measure:

If construction occurs during the time when milkweed plants may host monarch eggs or caterpillars (approximately mid-March through late September) and construction activity would require the removal of milkweed plants, the plants shall be surveyed by a qualified biologist no more than 14 days prior to plant removal for the presence of eggs or caterpillars. If eggs or caterpillars are detected, the plants shall be avoided until they are no longer being utilized by monarch

caterpillars, as confirmed by a qualified biologist. If no eggs or caterpillars are detected, no additional protection measures are necessary.

***Coast (Blainville's) Horned Lizard***

There is a low potential for Blainville's horned lizard to occur within the Study Area. However, if the species were present at the time of construction, activity could result in direct harm to individual coast horned lizards. In order to avoid direct mortality to this species, the following measure is recommended:

Within 14 days prior to the initiation of any construction activity, a qualified biologist shall conduct preconstruction surveys for coast (Blainville's) horned lizard in appropriate habitats. If Blainville's horned lizard is found during the survey, a qualified biologist shall relocate the individuals to suitable habitat outside of the Project area, subject to review and approval by CDFW and/or El Dorado County.

***Nesting Birds***

The general project area supports vegetation that provides nesting habitat for migratory bird species, including special-status species such as tricolored blackbird, grasshopper sparrow, golden eagle, white-tailed kite, yellow-breasted chat, loggerhead shrike, and California black rail. If birds are nesting in the Project impact area at the time of construction, activity could disturb nesting birds, resulting in the loss of eggs or young or nest abandonment. In order to prevent potential disturbance and/or direct effects to active nests, we recommend the following measure:

If ground disturbance or other construction activities are proposed during the bird nesting season (February 1 – August 31), a focused survey for nesting raptors and migratory bird nests shall be conducted by a qualified biologist within 14 days prior to the beginning of construction activities in order to identify active nests. This survey shall be conducted within the proposed construction area and all accessible areas within the following buffer areas:

- 0.5 mile for bald eagle and golden eagle
- 0.25 mile for tree-nesting raptors
- 500 feet for tricolored blackbird
- 500 feet for all other species

Take avoidance burrowing owl surveys of suitable habitat will be conducted consistent with the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). Non-breeding season protocol will be used for surveys conducted between September 1 and January 31 and breeding season protocol will be used for surveys conducted between February 1 and August 31.

If nests are found, the following no-disturbance buffers shall be established:

- If active raptor nests are found, no construction activities shall take place within 0.25-mile for golden eagles or within 500 feet of other raptor nest(s) until the young have fledged.
- If active songbird nests are found, a 100-foot no disturbance buffer will be established. These no-disturbance buffers may be reduced based on consultation and approval by the County.

- If active tricolored blackbird nests are found, a 500-foot radius no-disturbance buffer shall be established and marked to ensure that construction activity does not encroach into the buffer area. The no-disturbance buffer may be removed, and construction may resume within the buffer area once the young have fledged.
- If active burrowing owl burrows are found, no construction activities shall take place within 250 feet of occupied burrows, and a no-disturbance buffer shall be marked on-site. The buffer may be removed once the young have fledged and/or are no longer dependent on the nest.

The perimeter of buffer/no-disturbance areas shall be indicated by bright orange temporary fencing. No construction activities or personnel shall enter the protected area, except with approval of the biologist. If trees containing nests or burrows must be removed as a result of Project implementation, removal shall be completed during the nonbreeding season (late September to March) if possible, or after a qualified biologist determines that the young have fledged (during the breeding season).

If no active nests are found during the focused survey(s), no further mitigation will be required.

Survey results shall be provided to the County within 15 days of completion of all surveys. Surveys shall be repeated if there is a break of construction of more than 14 days during the nesting season.

***Roosting Bats***

If the Project requires tree removal in oak woodland areas, construction could disturb tree-roosting bat species if they are present at the time of tree removal. In order to prevent potential disturbance and/or direct effects to occupied roosts, we recommend the following measure:

Pre-construction roosting bat surveys shall be conducted by a qualified biologist within 14 days prior to any tree removal. If no tree removal is proposed, no mitigation measures are necessary. If pre-construction surveys indicate that no roosts of special-status bats are present, or that roosts are inactive or potential habitat is unoccupied, no further mitigation is required. If roosting bats are found, exclusion shall be conducted as recommended by the qualified biologist. Methods may include acoustic monitoring, evening emergence surveys, and the utilization of two-step tree removal supervised by the qualified biologist. Two-step tree removal involves removal of all branches that do not provide roosting habitat on the first day, and the next day cutting down the remaining portion of the tree. Once the bats have been excluded, tree removal may occur.

**Worker Environmental Awareness Training**

Construction crews must be aware of regulations and conditions that apply to the Project and specific resources in the Study Area. We recommend that the Project proponent implement the following measure to inform construction personnel of the regulations and conditions that apply to the Project:

Prior to any dewatering, ground-disturbing, or vegetation-removal activities, a Worker Environmental Awareness Training (WEAT) shall be prepared and administered to the

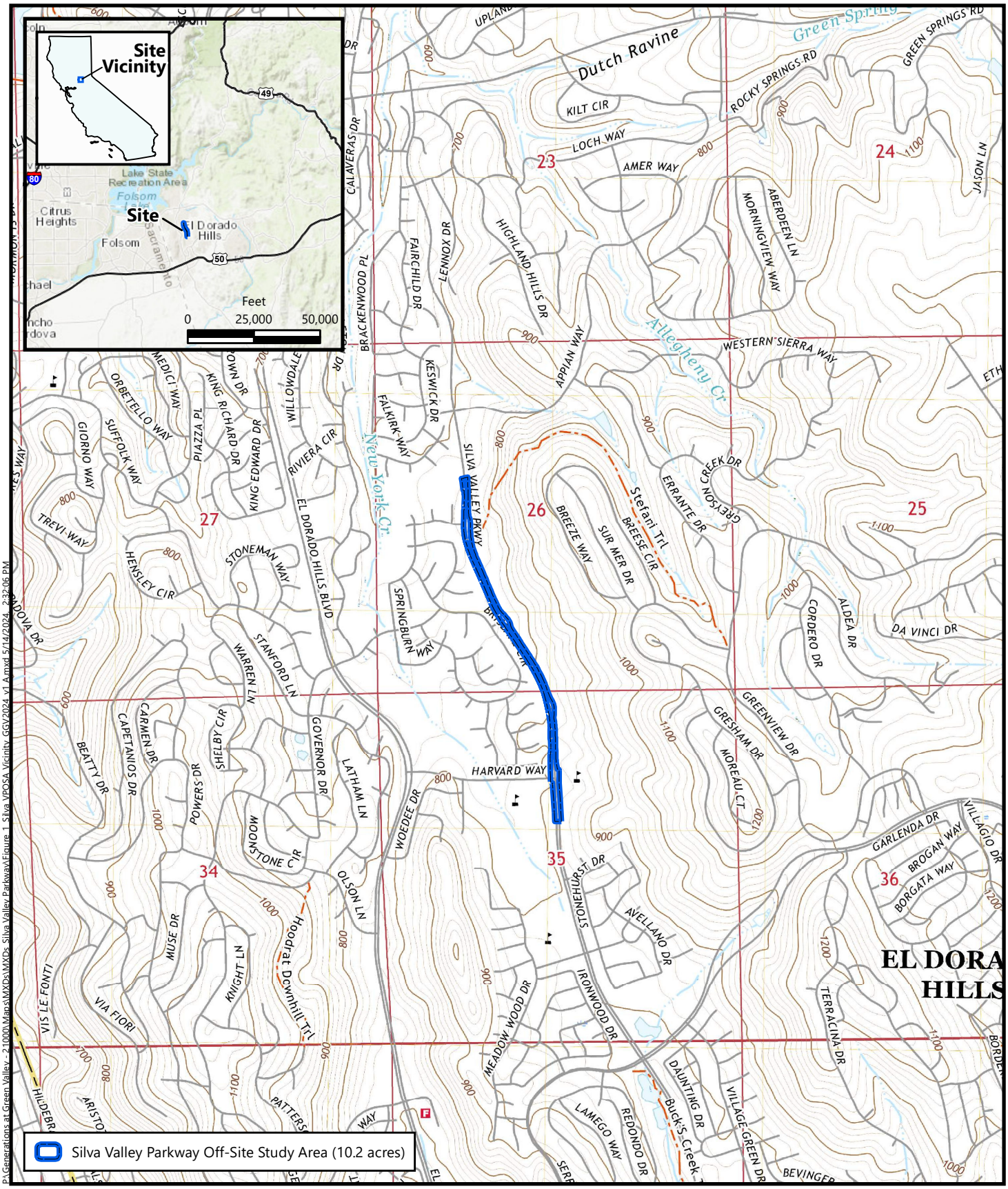
construction crews. The WEAT will include the following: discussion of the state and federal Endangered Species Act, the Clean Water Act, the Project's permits and CEQA documentation, and associated mitigation measures; consequences and penalties for violation or noncompliance with these laws and regulations; identification of special-status wildlife, location of any avoided Waters of the U.S; hazardous substance spill prevention and containment measures; and the contact person in the event of the discovery of a special-status wildlife species. The WEAT will also discuss the different habitats used by the species' different life stages and the annual timing of these life stages. A handout summarizing the WEAT information shall be provided to workers to keep on-site for future reference. Upon completion of the WEAT training, workers will sign a form stating that they attended the training, understand the information presented and will comply with the regulations discussed. Workers will be shown designated "avoidance areas" during the WEAT training; worker access should be restricted to outside of those areas to minimize the potential for inadvertent environmental impacts. Fencing and signage around the boundary of avoidance areas may be helpful.

# Figures

Figure 1. Site & Vicinity

Figure 2. Silva Valley Parkway Off-Site Study Area

Figure 3. Land Cover for the Silva Valley Parkway Off-Site Study Area




P:\Generations at Green Valley - 21000\Maps\MXDs\MXDs Silva Valley Parkway\Figure 1 Silva VPOSA Vicinity GGV2024 v1.Amxd 5/14/2024, 2:32:06 PM

**Figure 1**
**Silva Valley Parkway Off-Site Study Area Site and Vicinity**

*Generations at Green Valley*
*El Dorado County, California*

Source: United States Geologic Survey, 2021.
"Clarksville, California" 7.5-Minute Topographic Quadrangle
Sections 26 and 35 Township 10 North, Range 8 East, MDB&M
Latitude 38.687009, Longitude -121.070294

MADRONE ECOLOGICAL CONSULTING




P:\Generations at Green Valley - 21000\Maps\MXDs\MXDs Silva Valley Parkway\Figure 2 Project Area Silva VPOSA GGV2024 v1 A.mxd 5/14/2024 2:31:50 PM

**Figure 2**
**Silva Valley Parkway Off-Site Study Area and Generations at Green Valley Project**

*Generations at Green Valley*
*El Dorado County, California*

**Aerial Source:** Maxar, 1 May 2022.

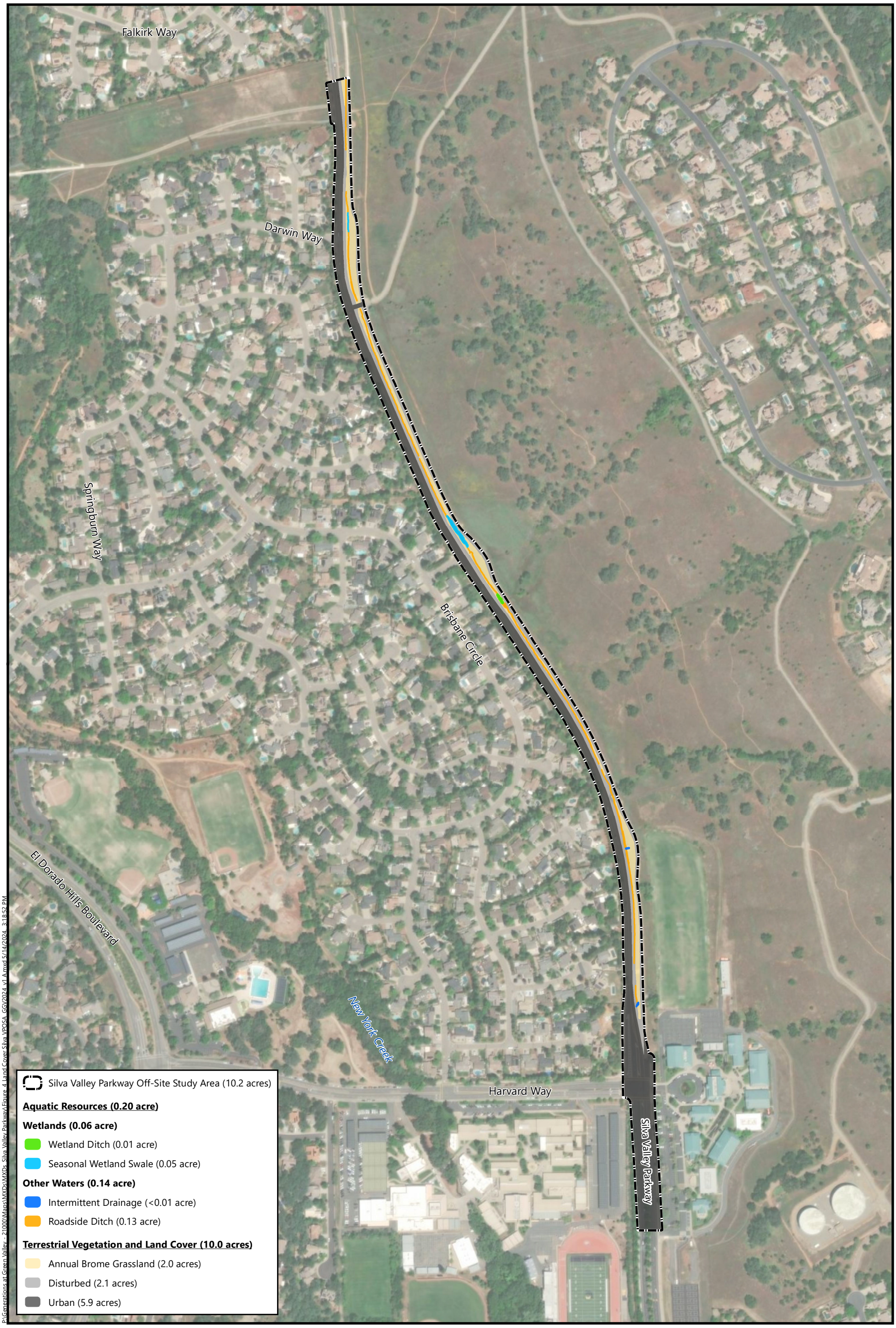



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**Figure 3**
**Land Cover for the Silva Valley Parkway Off-Site Study Area**

*Generations at Green Valley*
*El Dorado County, California*

MADRONE ECOLOGICAL CONSULTING

**Aerial Source:** Maxar, 1 May 2022.

# Appendix D

Septic Feasibility Study

# SEPTIC FEASIBILITY STUDY
# For a Portion of
# GENERATIONS AT GREEN VALLEY
# EL DORADO HILLS, EL DORADO COUNTY, CALIFORNIA

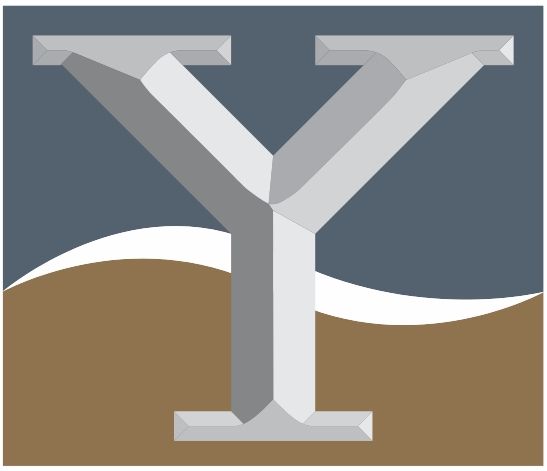
Prepared by:

Youngdahl Consulting Group, Inc.
1234 Glenhaven Court
El Dorado Hills, California 95762

Prepared For:

Green Valley Road Benefits, LLC
c/o TTLC Management
110 Blue Ravine Rd., Ste. 209
Folsom, California 95630

Project No. E11047.003
12 July 2022



YOUNGDAHL

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110 Blue Ravine Rd., Ste 209
Folsom, CA 95630

Project No. E11047.003
12 July 2022

Attention: Mr. Aidan Barry

Subject: **GENERATIONS AT GREEN VALLEY**
**El Dorado Hills, El Dorado County, California**
*Septic Feasibility Study*

Reference:
1) Standards for The Site Evaluation, Design, and Construction of Onsite Wastewater Treatment Systems (OWTS Manual), El Dorado County Department of Environmental Management, 13 May 2018.
2) Custom Soil Resource report for El Dorado Area, United States Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey, accessed 27 June 2022.
3) Loyd, R.C., (1984), Mineral Land Classification of the Folsom 15 Minute Quadrangle, Sacramento, El Dorado, Placer, and Amador Counties, California@, DMG Open File Report 84-50, California Department of Conservation, Division of Mines and Geology.

Dear Mr. Barry,

With your authorization, Youngdahl Consulting Group, Inc. (Youngdahl) has completed a septic feasibility study for a portion of the Generations at Green Valley project, a proposed residential development project located south of Green Valley Road in El Dorado Hills, El Dorado County, California. The subject property is assigned the El Dorado County Assessor's Parcel Numbers (APNs) 126-150-023 and 126-020-003. This report presents the results of a septic feasibility investigation performed by Youngdahl, which includes percolation test data and our recommendations as to the feasibility of onsite wastewater disposal.

Very truly yours,
Youngdahl Consulting Group, Inc.




David C. Sederquist, C.E.G., C.HG.
Senior Engineering Geologist/Hydrogeologist
7-15-22

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**GENERATIONS AT GREEN VALLEY**
**SEPTIC FEASIBILITY STUDY**
**GREEN VALLEY ROAD, EL DORADO HILLS, CALIFORNIA**

## 1.0 PURPOSE AND SCOPE

With the authorization of Mr. Aidan Barry of TTLC Management, Inc., Youngdahl Consulting Group, Inc. (Youngdahl) has completed a septic feasibility study for the Generations at Green Valley project, El Dorado County and designated Assessor's Parcel Numbers (APN) 126-150-023 and 126-020-003. The subject property is located on the south side of Green Valley Road, starting approximately 100 feet southeast of the intersection of Green Valley Road and Malcolm Dixon Road in El Dorado Hills, El Dorado County, California (Figures 1 - 3). The purpose of this septic system feasibility study was to evaluate several proposed lots within a larger subdivision that are proposed to use onsite wastewater disposal whereas the rest of the subdivision is planned to be served by a sewage collection system.

The portion of the property proposed to use onsite wastewater disposal includes seven (7) single-family residential lots. The purpose of this study was to evaluate onsite soils, the near surface geology, and the feasibility of an onsite wastewater disposal. The scope of this study included performing the excavation of three (3) test pits and three (3) sets of four (4) percolation tests per test pit. This study was conducted with adherence to *Standards for The Site Evaluation, Design, and Construction of Onsite Wastewater Treatment Systems (OWTS Manual), El Dorado County Department of Environmental Management, 13 May 2018.*

## 2.0 SITE DESCRIPTION

The site is currently former ranch land including a former residence and encompasses an approximately estimated 56.7-acre triangular shaped property (Figures 2 and 3). This site is accessed off Green Valley Road approximately 100 feet southeast of the intersection of Green Valley Road and Malcolm Dixon Road. Vegetation on the property is predominantly open oak woodland with grassland on gently rolling terrain. The project is dominated by Green Spring Creek flowing in a northwesterly direction with at least two (2) ponds and two seasonal drainages that flow in a northeasterly direction draining into Green Spring Creek. Ground elevations range from approximately 965 feet above mean sea level (MSL) near the northwest corner to 1135 feet above MSL on the southeast end of the property.

## 3.0 SOILS AND GEOLOGY

### *3.1 SOILS*

The soils on the project site are derived from the underlying weathered rock formations. The soils research consisted of accessing the online soils data available from the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) for the El Dorado Area (1974) (Reference 2). The soil and completely weathered rock interface were encountered at depths ranging from 0.75 to 2.5-feet below ground surface (bgs) in the test pits. According to the Soil Survey of the El Dorado Area, the site is underlain by the Auburn Silt Loam (AwD), 2 to 30 percent slopes (42% of the area), the Auburn very rocky silt loam (AxD), 2 to 30 percent slopes (33% of the area), Serpentine rock land (SaF) (24% of the area, and Placer Diggings (PrD) (1% of the area).

3.1.1 Auburn Silt Loam, AwD Soils

The Auburn silt loam, 2 to 30 percent slopes (AwD) is mapped within the southern portion of the property, and is characterized as well drained in hydrologic soil group D with 3 percent bedrock outcrop.

3.1.2 Auburn Very Rocky Loam, AxD Soils

The Auburn very rocky loam, 2 to 30 percent slopes (AxD) is mapped mostly in the northwestern and southeastern portions of the site, and is characterized as well drained 15 percent bedrock cover.

3.1.3 Serpentine Rock Land, SaF

The Serpentine rock land, (SaF) is mapped along the northeastern side of the property and is uncharacterized in regards to drainage.

### *3.2 GEOLOGY*

The site is located on the western margin of the Sierra Nevada geomorphic province of California. The western margin of the Sierra Nevada is characterized by northwest trending, fault bounded metamorphic belts. The site is underlain by pre-Jurassic age, metavolcanic rocks of Foothill Mélange-Ophiolite Terrane, and ultramafic rock, which are described as a chaotic assemblage of rocks of various lithologies and ages within the Sierra Nevada foothills (Reference 4).

3.2.1 Subsurface Exploration

Three (3) exploratory test pits, designated GTP-1 through GTP-3, were excavated on 13 June 2022 using a John Deere 410L backhoe with a 24-inch bucket, under the supervision of a Youngdahl Professional Geologist. As the excavation proceeded, the sidewalls were logged using the Standard Practice for Subsurface Characterization of Test Pits for On-site Septic Systems (ASTM D 5921-96), which primarily follows the USDA, Soil Conservation Service (SCS) soil classification system. The test pits were backfilled on the same day with the native material.

The test pits completed for this investigation encountered relatively similar soil conditions. Soils encountered during the exploration included silty LOAM (sil) to depths of between 0.75 and 2.0 feet below ground surface (bgs). Moderately to intensely weathered metavolcanic BEDROCK was encountered from the near surface soil layer to the total depth explored for each test pit. Roots were observed from depths of approximately 0.75 to 2 feet bgs. Groundwater was not encountered during our explorations. A more detailed description of the subsurface conditions encountered is presented graphically on the “Exploratory Test Pit Logs”, Figures 4 through 8.

## 4.0 PERCOLATION TESTING

Percolation tests for the areas of all three test pits were performed on the 13th through the 14th of June 22. Testing was performed with adherence to *Standards for The Site Evaluation, Design, and Construction of Onsite Wastewater Treatment Systems (OWTS Manual), El Dorado County Department of Environmental Management, 13 May 2018.* Procedures and results for the percolation tests are presented below.

### *4.1 Testing Procedures*

On the 13th of June, an 8-inch diameter electric auger was used to bore four (4) test holes per test area to the depths reported on the percolation test sheets. A 6-inch diameter perforated Schedule 40 PVC percolation stand was placed in each test hole. The stand was seated in a bed of pea gravel that was also placed in the annulus between the soil and PVC to stabilize the

percolation stand. A float integrated with a graduated scale (in inches) was used to measure water-level drops during the percolation test. Each test hole was filled with 12 inches of water to begin the 4-hour presoak.

On the following day, 6 inches of water was added to each boring. The rate of fall was measured for 2 to 4 hours with refilling as necessary.

### *4.2 Testing Results*

Percolation tests were conducted on 14 June September 2022. The percolation rates (averaged for each test area) ranged from 3 minutes per inch (mpi) at GTP-1 to 12.4 mpi at GTP-3. Percolation testing data, including individual test hole rates, individual test hole depths, and averaged test pit rates are presented in Table 1 (below). Percolation test data for each percolation test are included in Appendix A.

**Table 1 - Percolation Test Data**

| Test Pit No. | Testing Date | Test Hole #1 Rate[1] (Depth in Inches) | Test Hole #2 Rate (Depth in Inches) | Test Hole #3 Rate (Depth in Inches) | Test Hole #4 Rate (Depth in Inches) | Average Percolation Rate (mpi) | New Lot Minimum Disposal Area (sq. ft.) |
|---|---|---|---|---|---|---|---|
| GTP-1 | 6/14/2022 | 1.3 (18) | 6.3 (36) | 4.4 (24) | 0.9 (30) | 3.2 | 6,000 |
| GTP-2 | 6/14/2022 | 1.2 (24) | 8.6 (18) | 1.1 (36) | 1.1 (30) | 3.0 | 6,000 |
| GTP-3 | 6/14/2022 | 30 (24) | 5.5 (30) | 9.7 (18) | 4.8 (18) | 12.4 | 8,000 |

Notes:
[1] In minutes per inch
mpi - Minutes Per Inch

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

Each of the three (3) percolation tests were successful. Overall, no significant variations in soil subsurface conditions were found across the site. The weathered bedrock conditions were also similar in terms of rock type, but varied somewhat in degree of induration.

We anticipate that subsurface conditions and percolation characteristics across the site will be consistent with those observed in the current study. While each of the test pits for this study were sited to avoid slope and drainage swale constraints, other constraints and setbacks for onsite disposal sites were not a part of this scope of work, and should be considered for future lot layouts.

Parcel map boundaries for the site are being developed based on numerous constraints, including but not limited to onsite wastewater disposal feasibility. At some point in the feasibility process a definitive map showing potential parcels will be developed. Additional mantle tests and percolation testing will be required by the El Dorado County Department of Environmental Management to validate the parcel layout for a new final map.

Based on our study, the additional exploration should be completed prior to filing of the Final Map to locate suitable disposal areas in order to demonstrate the feasibility of on-site wastewater disposal for lots not covered during the original exploration. Existing onsite wells may need to be destroyed to eliminate adverse setbacks. However, it is our opinion that it is most likely that a significant number of lots using onsite wastewater disposal are feasible for this project.

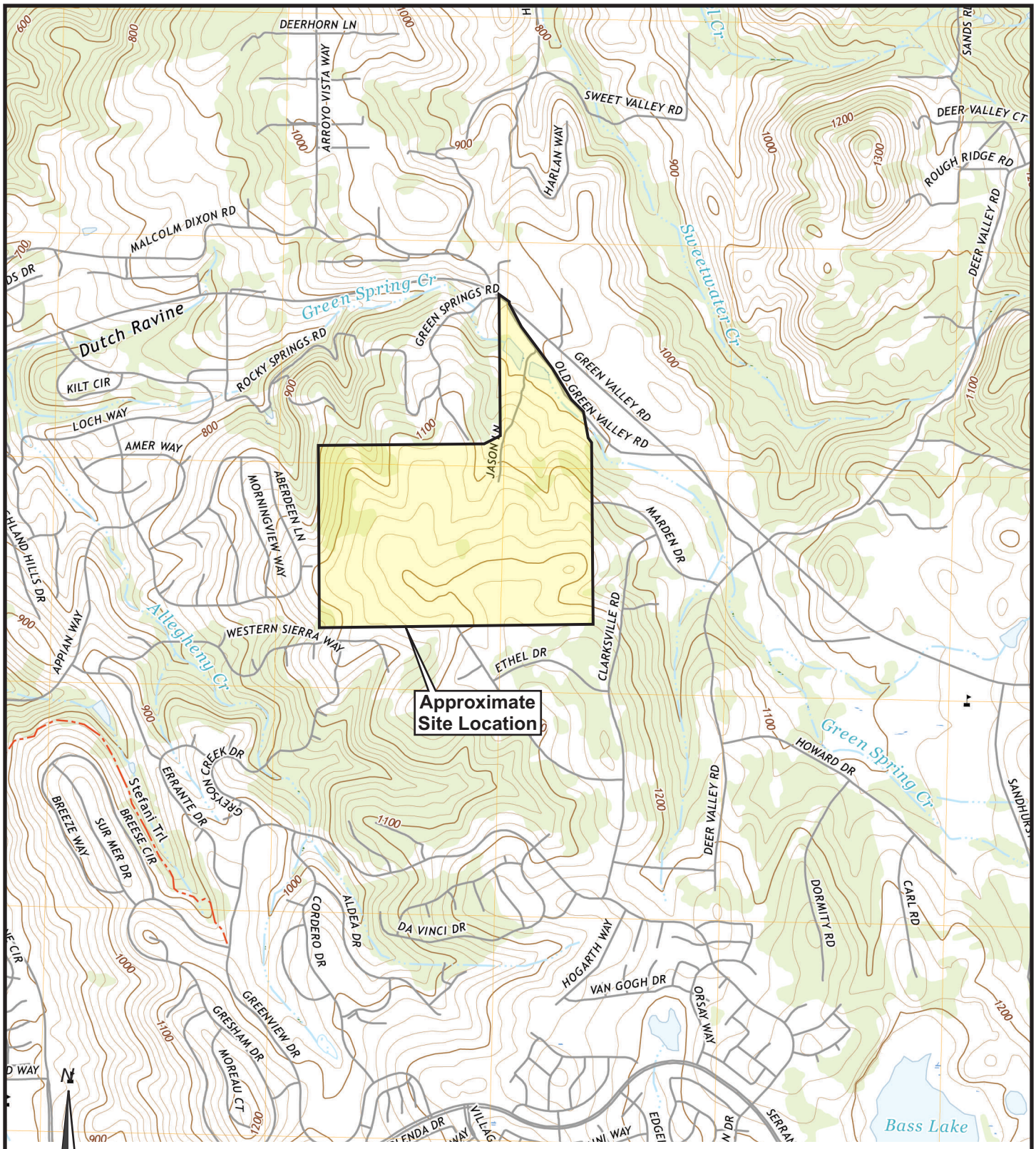
## 6.0 LIMITATIONS AND UNIFORMITY OF CONDITIONS

This report has been prepared for the exclusive use of Green Valley Road Benefits, LLC, c/o TTLC Management, Inc. for specific application to the Generations at Green Valley project. Youngdahl Consulting Group, Inc. has endeavored to comply with generally accepted environmental geologic practice common to the local area. Youngdahl Consulting Group, Inc. makes no other warranty, express or implied.

As of the present date, the findings of this report are valid for the property studied. With the passage of time, changes in the conditions of a property can occur whether they are due to natural processes or to the works of man on this or adjacent properties. Legislation or the broadening of knowledge may result in changes in applicable standards. Changes outside of our control may cause this report to be invalid, wholly or partially. Therefore, this report should not be relied upon after a period of three years without our review nor should it be used or is it applicable for any properties other than those studied. Note that Youngdahl Consulting Group, Inc. is not responsible for any claims, damages, or liability associated with any other party's interpretation of this report's subsurface data or reuse of this report's subsurface data or environmental geologic analyses without the express written authorization of Youngdahl Consulting Group, Inc.

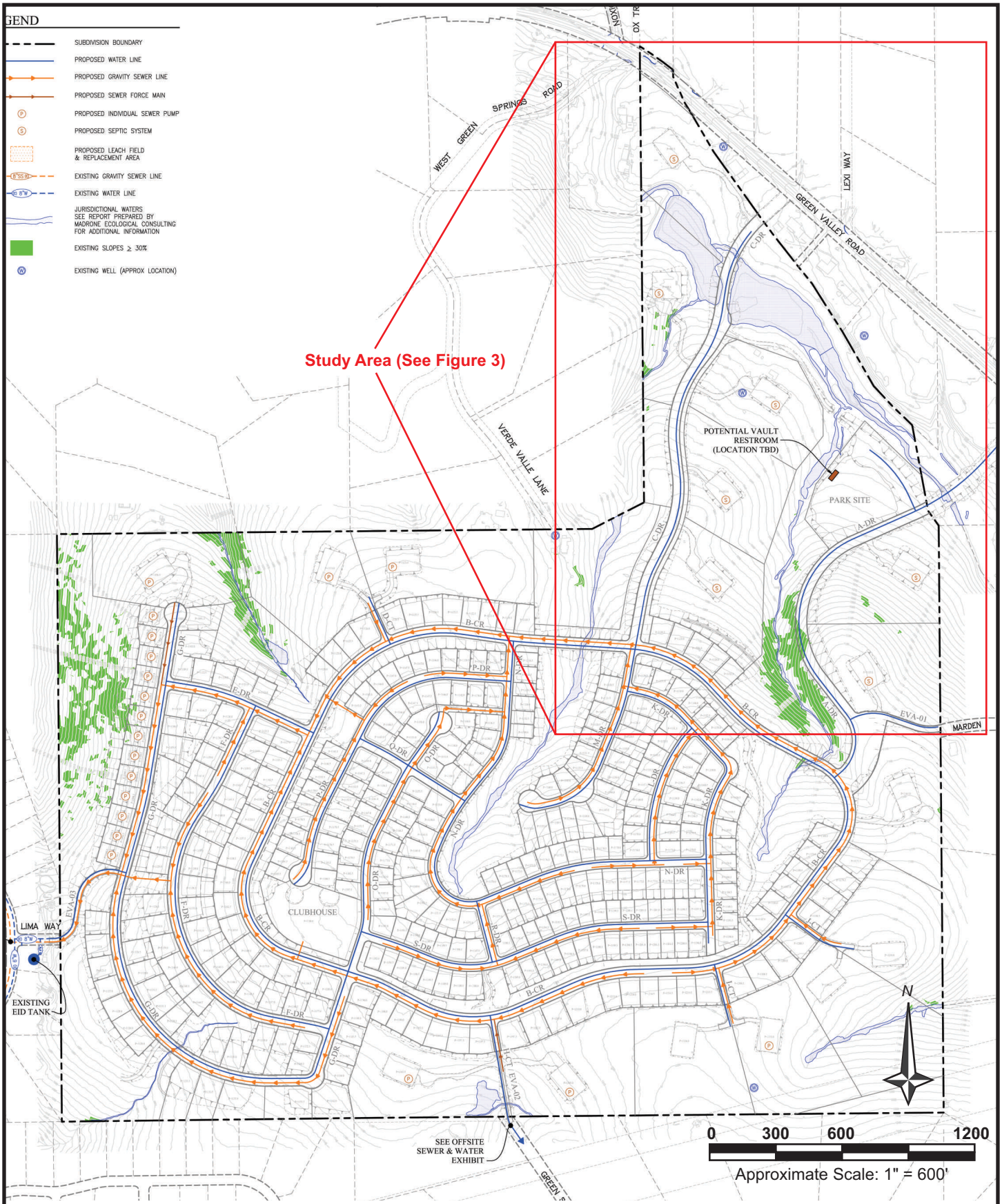
The analyses and recommendations contained in this report are based on limited windows into the subsurface conditions and data obtained from subsurface exploration. The methods used only directly indicate subsurface conditions at the specific locations where testing was performed, only directly at the time they were tested, and only directly to the depths penetrated.

# FIGURES




***BASE MAP REFERENCE:*** *U.S.G.S. 7.5 Minute Topographic Series, Clarksville Quadrangle, Dated 2021*

| | | | |
|---|---|---|---|
| YOUNGDAHL CONSULTING GROUP, INC. ESTABLISHED 1984 | Project No.: E11047.003 | **VICINITY MAP** **Generations at Green Valley** El Dorado Hills, California | **FIGURE 1** |
| | **July 2022** | | |




**REFERENCE:** *Onsite Sewer & Water Exhibit, Generations at Green Valley, CTA Engineering Inc., Dated Nov. 2021*

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# OVERALL SITE MAP

**Generations at Green Valley**
El Dorado Hills, California

FIGURE 2

GTP-1 = Approximate Test Pit Locations

1a = Approximate Percolation Test Locations

100' Well Setback

GTP-1

3a

3b

3c

3d

6,000 sqft

100' Setback

100' Setback

C-DR

LEXI WAY

GREEN VALLEY ROAD

50' Drainage Setback

GTP-2

2a

2c

2b

2d

6,000 sqft

100' Well Setback

100' Setback

POTENTIAL VAULT RESTROOM (LOCATION TBD)

PARK SITE

A-DR

C-DR

8,000 sqft

GTP-3

1d

1c

1b

1a

K-DR

B-CR

A-DR

EVA-01

MARDEN

N

0 100 200 400

Approximate Scale: 1" = 200'

**REFERENCE:** *Onsite Sewer & Water Exhibit, Generations at Green Valley, CTA Engineering Inc., Dated Nov. 2021*

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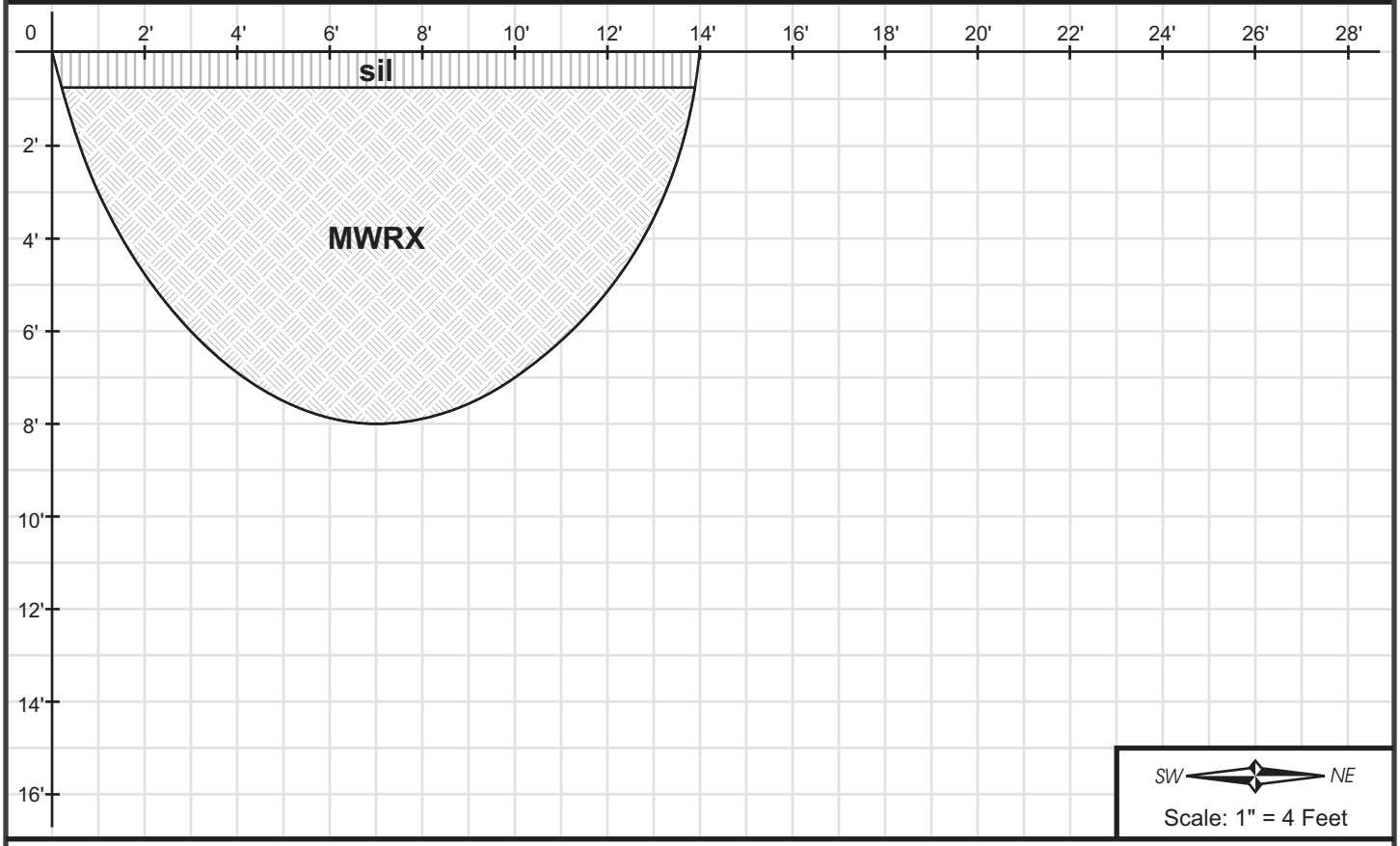
# SITE PLAN

**Generations at Green Valley**
El Dorado Hills, California

FIGURE 3

| Logged By: **DCS** | Date: **6 June 2022** | Lat / Lon: **W 38.71490° / W 121.044120°** | | Pit No. **GTP-1** |
|---|---|---|---|---|
| Equipment: **John Deere 410G with 24" Bucket** | | Pit Orientation: **72°** | Elevation: **~** | |

| Depth (Feet) | Geotechnical Description & Unified Soil Classification | Sample | Tests & Comments |
|---|---|---|---|
| *@ 0' - 0.75'* | **Silt Loam**, 7.5 YR 4/6 Strong Brown, 10% gravel, no redoximorphic features, coarsely granular, many fine interstitial and tubular pores, very friable, non-plastic, non-sticky, few fine roots, abrupt irregular boundary, dry | | |
| *@ 0.75' - 8'* | **Moderately weathered rock,** Gray brown | | |
| | Test pit terminated at 8'<br>No free groundwater encountered<br>No caving noted | | |




**Note:** The test pit log indicates subsurface conditions only at the specific location and time noted. Subsurface conditions, including groundwater levels, at other locations of the subject site may differ significantly from conditions which, in the opinion of Youngdahl Consulting Group, Inc., exist at the sampling locations, Note, too, that the passage of time may affect conditions at the sampling locations.

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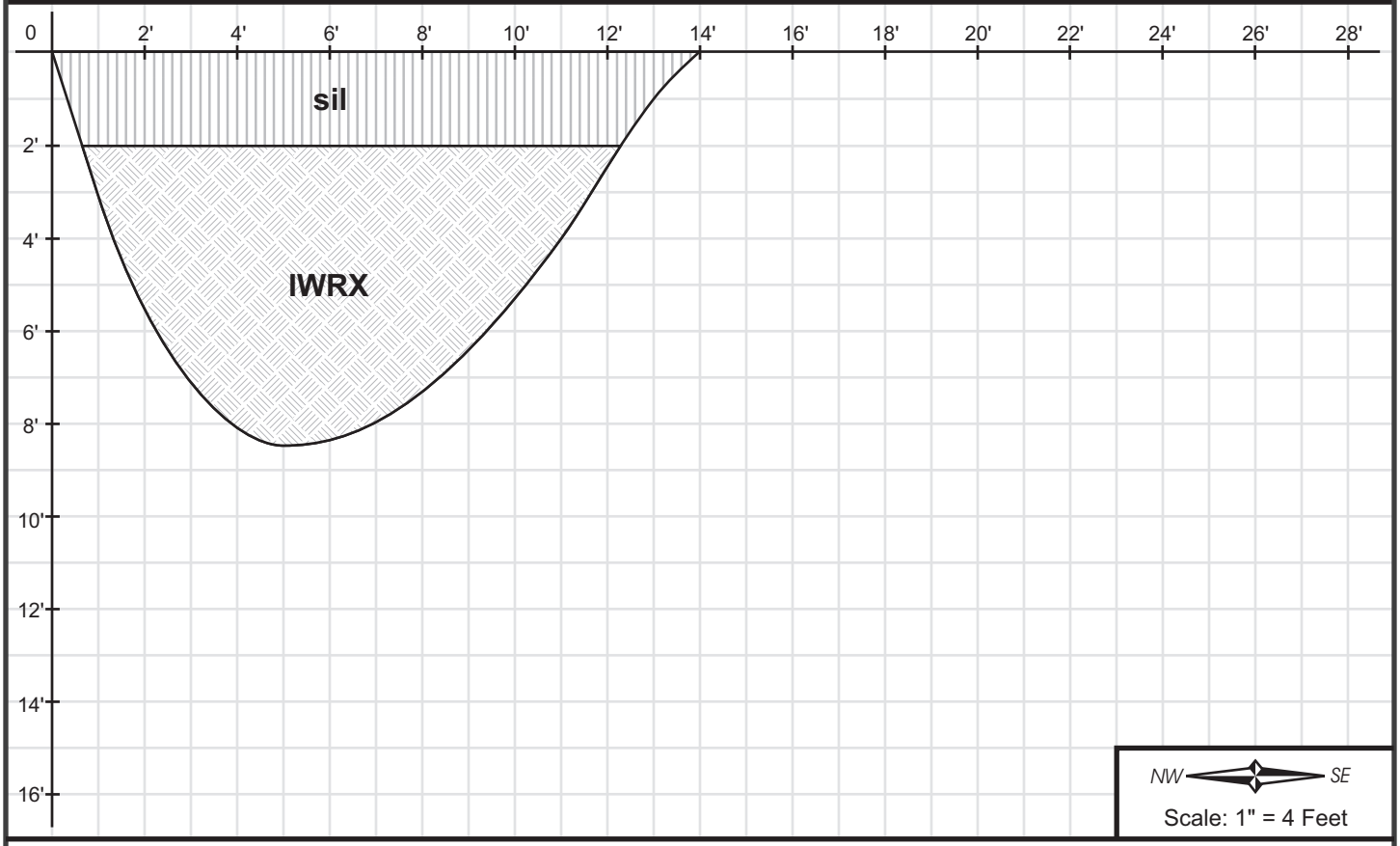
# EXPLORATORY TEST PIT LOG

**Generations at Green Valley**
El Dorado Hills, California

FIGURE 4

| Logged By: **DCS** | Date: **6 June 2022** | Lat / Lon: **W 38.709010° / W 121.042790°** | | Pit No. **GTP-2** |
|---|---|---|---|---|
| Equipment: **John Deere 410G with 24" Bucket** | | Pit Orientation: **140°** | Elevation: **~** | |

| Depth (Feet) | Geotechnical Description & Unified Soil Classification | Sample | Tests & Comments |
|---|---|---|---|
| *@ 0' - 2'* | **Silt Loam**, 7.5 YR 4/6 Strong Brown, 10% gravel, no redoximorphic features, medium blocky, many medium to coarse interstitial and tubular pores, very friable, non-plastic, non-sticky, few fine roots, abrupt irregular boundary, dry | | |
| *@ 2' - 8.5'* | Intensely weathered rock, light gray, 100% stone, few red redoximorphic concentrations, massive, no soil pores, firm, non-plastic, non-sticky, no roots, dry | | |
| | Test pit terminated at 8.5'<br>No free groundwater encountered<br>No caving noted | | |




**Note:** The test pit log indicates subsurface conditions only at the specific location and time noted. Subsurface conditions, including groundwater levels, at other locations of the subject site may differ significantly from conditions which, in the opinion of Youngdahl Consulting Group, Inc., exist at the sampling locations, Note, too, that the passage of time may affect conditions at the sampling locations.

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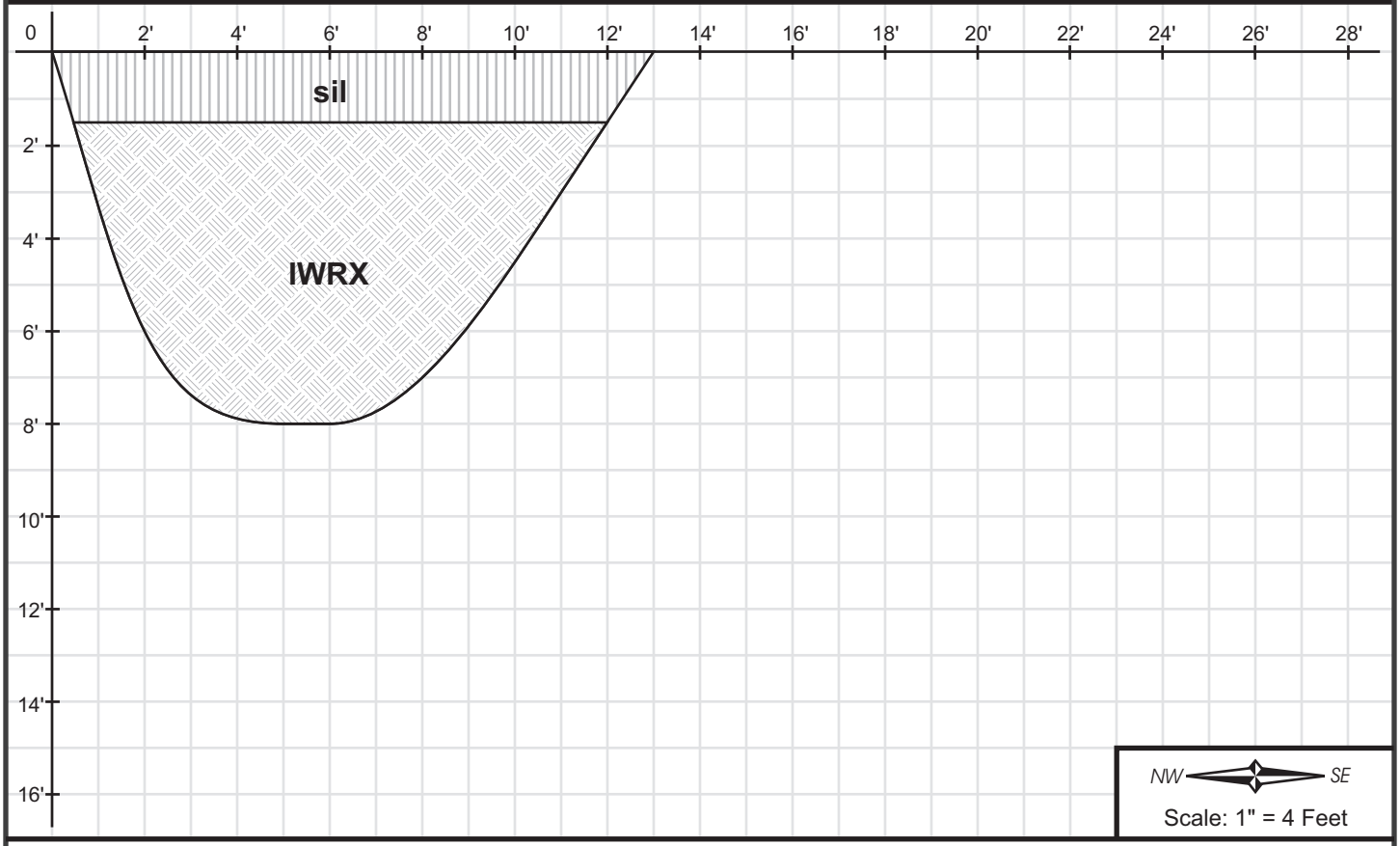
# EXPLORATORY TEST PIT LOG

**Generations at Green Valley**
El Dorado Hills, California

**FIGURE 5**

| Logged By: **DCS** | Date: **6 June 2022** | Lat / Lon: **W 38.705590° / W 121.041330°** | | Pit No. **GTP-3** |
|---|---|---|---|---|
| Equipment: **John Deere 410G with 24" Bucket** | | Pit Orientation: **147°** | Elevation: **~** | |

| Depth (Feet) | Geotechnical Description & Unified Soil Classification | Sample | Tests & Comments |
|---|---|---|---|
| *@ 0' - 1.5'* | **Silt Loam**, 7.5 YR 4/6 Strong Brown, no redoximorphic features, medium blocky, many medium to coarse interstitial and tubular pores, very friable, non-plastic, non-sticky, few fine roots, diffuse irregular boundary, dry. | | |
| *@ 1.5' - 8'* | **Intensely weather rock**, red brown, 100% stone | | |
| | Test pit terminated at 8'<br>No free groundwater encountered<br>No caving noted | | |




**Note:** The test pit log indicates subsurface conditions only at the specific location and time noted. Subsurface conditions, including groundwater levels, at other locations of the subject site may differ significantly from conditions which, in the opinion of Youngdahl Consulting Group, Inc., exist at the sampling locations, Note, too, that the passage of time may affect conditions at the sampling locations.

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# EXPLORATORY TEST PIT LOG

**Generations at Green Valley**
El Dorado Hills, California

FIGURE 6

Consultant: **YCG** | Date: **6 June 2022** | Parent Rock Type: [V] G MS A Other

**SOIL PIT # 1** — *1ST Horizon* Depth: *0'* to *0.75'*
**Slope:** *2* **% Aspect:** *FLAT*
**Texture:** s ls sl sc scl l c cl sic sicl [sil] si DRX IWRX MWRX DG
**Rock Fragments:** gravel ~ % cobble ~ % stone ~ %
**Color:** 7.5 YR 4/6
**Redoxymorphic Features:** [none] few common many
RC color ~ RD color ~ RM color ~
**Structure:** [gran] platy block prism f m [c] single grain massive
**Soil Pores:** none few common [many] [f] m c [inters] tubular
**Moist Consistence:** l [vfr] fr f vf ef
**Plasticity:** [np] sp mp vp **Stickiness:** ns ss ms vs
**Roots:** none [few] common many vf [f] m c
**Boundary Distinctness:** [a] c g d **Topography:** s w [i] b
**Moisture:** [dry] moist wet saturated
**NOTES:** ~
**Same as SOIL PIT #** **Horizon #**

**SOIL PIT # 2** — *1ST Horizon* Depth: *0'* to *2'*
**Slope:** *4* **% Aspect:** *FLAT*
**Texture:** s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
**Rock Fragments:** gravel *5* % cobble ~ % stone ~ %
**Color:** 7.5 YR 4/6
**Redoxymorphic Features:** [none] few common many
RC color ~ RD color ~ RM color ~
**Structure:** gran platy [block] prism f [m] c single grain massive
**Soil Pores:** none few common [many] f [m c] [inters] tubular
**Moist Consistence:** l [vfr] fr f vf ef
**Plasticity:** [np] sp mp vp **Stickiness:** [ns] ss ms vs
**Roots:** none [few] common many [vf] f m c
**Boundary Distinctness:** [a] c g d **Topography:** s w [i] b
**Moisture:** [dry] moist wet saturated
**NOTES:** ~
**Same as SOIL PIT #** **Horizon #**

*2nd Horizon* Depth: *0.75'* to *8'*
**Texture:** s ls sl sc scl l c cl sic sicl sil si DRX IWRX [MWRX] DG
**Rock Fragments:** gravel ~ % cobble ~ % stone *100* %
**Color:** Grey brown
**Redoxymorphic Features:** none few common many
RC color ~ RD color ~ RM color ~
**Structure:** gran platy block prism f m c single grain massive
**Soil Pores:** none few common many f m c inters tubular
**Moist Consistence:** l vfr fr f vf ef
**Plasticity:** np sp mp vp **Stickiness:** ns ss ms vs
**Roots:** none few common many vf f m c
**Boundary Distinctness:** a c g d **Topography:** s w i b
**Moisture:** dry moist wet saturated
**NOTES:**
**Same as SOIL PIT #** **Horizon #**

*2nd Horizon* Depth: *2'* to *8.5'*
**Texture:** s ls sl sc scl l c cl sic sicl sil si DRX [IWRX] MWRX DG
**Rock Fragments:** gravel ~ % cobble ~ % stone *100* %
**Color:** Light Grey
**Redoxymorphic Features:** none [few] common many
RC color *Red* RD color ~ RM color ~
**Structure:** gran platy block prism f m c single grain [massive]
**Soil Pores:** [none] few common many f m c inters tubular
**Moist Consistence:** l vfr fr [f] vf ef
**Plasticity:** [np] sp mp vp **Stickiness:** [ns] ss ms vs
**Roots:** [none] few common many vf f m c
**Boundary Distinctness:** a c g d **Topography:** s w i b
**Moisture:** [dry] moist wet saturated
**NOTES:**
**Same as SOIL PIT #** **Horizon #**

*3rd Horizon* Depth: ~ to ~
**Texture:** s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
**Rock Fragments:** gravel ~ % cobble ~ % stone ~ %
**Color:** ~
**Redoxymorphic Features:** none few common many
RC color ~ RD color ~ RM color ~
**Structure:** gran platy block prism f m c single grain massive
**Soil Pores:** none few common many f m c inters tubular
**Moist Consistence:** l vfr fr f vf ef
**Plasticity:** np sp mp vp **Stickiness:** ns ss ms vs
**Roots:** none few common many vf f m c
**Boundary Distinctness:** a c g d **Topography:** s w i b
**Moisture:** dry moist wet saturated
**NOTES:** ~
**Same as SOIL PIT #** **Horizon #**

*3rd Horizon* Depth: ~ to ~
~
**Texture:** s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
**Rock Fragments:** gravel ~ % cobble ~ % stone ~ %
**Color:** ~
**Redoxymorphic Features:** none few common many
RC color ~ RD color ~ RM color ~
**Structure:** gran platy block prism f m c single grain massive
**Soil Pores:** none few common many f m c inters tubular
**Moist Consistence:** l vfr fr f vf ef
**Plasticity:** np sp mp vp **Stickiness:** ns ss ms vs
**Roots:** none few common many vf f m c
**Boundary Distinctness:** a c g d **Topography:** s w i b
**Moisture:** dry moist wet saturated
**NOTES:** ~
**Same as SOIL PIT #** **Horizon #**

*4th Horizon* Depth: ~ to ~
**Texture:** s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
**Rock Fragments:** gravel ~ % cobble ~ % stone ~ %
**Color:** ~
**Redoxymorphic Features:** none few common many
RC color ~ RD color ~ RM color ~
**Structure:** gran platy block prism f m c single grain massive
**Soil Pores:** none few common many f m c inters tubular
**Moist Consistence:** l vfr fr f vf ef
**Plasticity:** np sp mp vp **Stickiness:** ns ss ms vs
**Roots:** none few common many vf f m c
**Boundary Distinctness:** a c g d **Topography:** s w i b
**Moisture:** dry moist wet saturated
**NOTES:** ~
**Same as SOIL PIT #** **Horizon #**

*4th Horizon* Depth: ~ to ~
**Texture:** s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
**Rock Fragments:** gravel ~ % cobble ~ % stone ~ %
**Color:** ~
**Redoxymorphic Features:** none few common many
RC color ~ RD color ~ RM color ~
**Structure:** gran platy block prism f m c single grain massive
**Soil Pores:** none few common many f m c inters tubular
**Moist Consistence:** l vfr fr f vf ef
**Plasticity:** np sp mp vp **Stickiness:** ns ss ms vs
**Roots:** none few common many vf f m c
**Boundary Distinctness:** a c g d **Topography:** s w i b
**Moisture:** dry moist wet saturated
**NOTES:** ~
**Same as SOIL PIT #** **Horizon #**

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# EXPLORATORY SOIL PIT LOG

**Generations at Green Valley**
El Dorado Hills, California

FIGURE 7

Consultant: **YCG** | Date: **6 June 2022** | Parent Rock Type: [V] G MS A Other

**SOIL PIT # 3** — ***1st Horizon*** **Depth:** 0' to 1.5'
**Slope:** 20 **% Aspect:** FLAT
**Texture:** s ls sl sc scl l c cl sic sicl [sil] si DRX IWRX MWRX DG
**Rock Fragments:** gravel ~ % cobble ~ % stone ~ %
**Color:** 7.5 YR 4/6
**Redoxymorphic Features:** [none] few common many
RC color ~ RD color ~ RM color ~
**Structure:** gran platy [block] prism f [m] c single grain massive
**Soil Pores:** none few common [many] f [m c] inters tubular
**Moist Consistence:** l [vfr] fr f vf ef
**Plasticity:** [np] sp mp vp **Stickiness:** ns ss ms vs
**Roots:** none [few] common many vf [f] m c
**Boundary Distinctness:** a c g [d] **Topography:** s w [i] b
**Moisture:** [dry] moist wet saturated
**NOTES:** ~
**Same as SOIL PIT #** ***Horizon #***

**SOIL PIT #** ***1st Horizon*** **Depth:** _____ to _____
**Slope:** _____ **% Aspect:** _____
**Texture:** s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
**Rock Fragments:** gravel _____ % cobble ~ % stone ~ %
**Color:**
**Redoxymorphic Features:** none few common many
RC color ~ RD color ~ RM color ~
**Structure:** gran platy block prism f m c single grain massive
**Soil Pores:** none few common many f m c inters tubular
**Moist Consistence:** l vfr fr f vf ef
**Plasticity:** np sp mp vp **Stickiness:** ns ss ms vs
**Roots:** none few common many vf f m c
**Boundary Distinctness:** a c g d **Topography:** s w i b
**Moisture:** dry moist wet saturated
**NOTES:** ~
**Same as SOIL PIT #** ***Horizon #***

***2nd Horizon*** **Depth:** 1.5' to 8'
**Texture:** s ls sl sc scl l c cl sic sicl sil si DRX [IWRX] MWRX DG
**Rock Fragments:** gravel ~ % cobble ~ % stone 100 %
**Color:** Light brown
**Redoxymorphic Features:** [none] few common many
RC color ~ RD color ~ RM color ~
**Structure:** gran platy block prism f m c single grain massive
**Soil Pores:** none few common many f m c inters tubular
**Moist Consistence:** l vfr fr f vf ef
**Plasticity:** np sp mp vp **Stickiness:** ns ss ms vs
**Roots:** none few common many vf f m c
**Boundary Distinctness:** a c g d **Topography:** s w i b
**Moisture:** dry moist wet saturated
**NOTES:**
**Same as SOIL PIT #** ***Horizon #***

***2nd Horizon*** **Depth:** _____ to _____
**Texture:** s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
**Rock Fragments:** gravel ~ % cobble ~ % stone _____ %
**Color:**
**Redoxymorphic Features:** none few common many
RC color _____ RD color ~ RM color ~
**Structure:** gran platy block prism f m c single grain massive
**Soil Pores:** none few common many f m c inters tubular
**Moist Consistence:** l vfr fr f vf ef
**Plasticity:** np sp mp vp **Stickiness:** ns ss ms vs
**Roots:** none few common many vf f m c
**Boundary Distinctness:** a c g d **Topography:** s w i b
**Moisture:** dry moist wet saturated
**NOTES:**
**Same as SOIL PIT #** ***Horizon #***

***3rd Horizon*** **Depth:** ~ to ~
**Texture:** s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
**Rock Fragments:** gravel ~ % cobble ~ % stone ~ %
**Color:** ~
**Redoxymorphic Features:** none few common many
RC color ~ RD color ~ RM color ~
**Structure:** gran platy block prism f m c single grain massive
**Soil Pores:** none few common many f m c inters tubular
**Moist Consistence:** l vfr fr f vf ef
**Plasticity:** np sp mp vp **Stickiness:** ns ss ms vs
**Roots:** none few common many vf f m c
**Boundary Distinctness:** a c g d **Topography:** s w i b
**Moisture:** dry moist wet saturated
**NOTES:** ~
**Same as SOIL PIT #** ***Horizon #***

***3rd Horizon*** **Depth:** ~ to ~
~
**Texture:** s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
**Rock Fragments:** gravel ~ % cobble ~ % stone ~ %
**Color:** ~
**Redoxymorphic Features:** none few common many
RC color ~ RD color ~ RM color ~
**Structure:** gran platy block prism f m c single grain massive
**Soil Pores:** none few common many f m c inters tubular
**Moist Consistence:** l vfr fr f vf ef
**Plasticity:** np sp mp vp **Stickiness:** ns ss ms vs
**Roots:** none few common many vf f m c
**Boundary Distinctness:** a c g d **Topography:** s w i b
**Moisture:** dry moist wet saturated
**NOTES:** ~
**Same as SOIL PIT #** ***Horizon #***

***4th Horizon*** **Depth:** ~ to ~
**Texture:** s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
**Rock Fragments:** gravel ~ % cobble ~ % stone ~ %
**Color:** ~
**Redoxymorphic Features:** none few common many
RC color ~ RD color ~ RM color ~
**Structure:** gran platy block prism f m c single grain massive
**Soil Pores:** none few common many f m c inters tubular
**Moist Consistence:** l vfr fr f vf ef
**Plasticity:** np sp mp vp **Stickiness:** ns ss ms vs
**Roots:** none few common many vf f m c
**Boundary Distinctness:** a c g d **Topography:** s w i b
**Moisture:** dry moist wet saturated
**NOTES:** ~
**Same as SOIL PIT #** ***Horizon #***

***4th Horizon*** **Depth:** ~ to ~
**Texture:** s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
**Rock Fragments:** gravel ~ % cobble ~ % stone ~ %
**Color:** ~
**Redoxymorphic Features:** none few common many
RC color ~ RD color ~ RM color ~
**Structure:** gran platy block prism f m c single grain massive
**Soil Pores:** none few common many f m c inters tubular
**Moist Consistence:** l vfr fr f vf ef
**Plasticity:** np sp mp vp **Stickiness:** ns ss ms vs
**Roots:** none few common many vf f m c
**Boundary Distinctness:** a c g d **Topography:** s w i b
**Moisture:** dry moist wet saturated
**NOTES:** ~
**Same as SOIL PIT #** ***Horizon #***

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Project No.: E11047.003

July 2022

# EXPLORATORY SOIL PIT LOG

**Generations at Green Valley**
El Dorado Hills, California

**FIGURE 8**

**APPENDIX A**

*Results of Percolation Tests*

# Percolation Test Data Sheet

**Project No.** E11047.003
**Test Pit No.** GTP-1
**Date:** 6/14/2022
**Testhole No.:** 1A **Sheet No.:** 1 of 3
**GPS** 38.70552 -121.04126 **Testhole Depth:** 1.5' **Width:** 8"

| Start Time | End Time | Elapsed Time | Water-level Start (inches) | Water-level End (inches) | Difference in Water Level (inches) |
|---|---|---|---|---|---|
| 9:00:00 AM | 9:30:00 AM | 0:30 | 7.1 | 0 | 7.10 |
| 9:30:00 AM | 10:00:00 AM | 0:30 | 7.5 | 0 | 7.50 |
| 10:00:00 AM | 10:10:00 AM | 0:10 | 7.2 | 0 | 7.20 |
| 10:10:00 AM | 10:20:00 AM | 0:10 | 7.2 | 0 | 7.20 |
| 10:20:00 AM | 10:30:00 AM | 0:10 | 7.4 | 0 | 7.40 |
| 10:30:00 AM | 10:40:00 AM | 0:10 | 7.1 | 0 | 7.10 |
| 10:40:00 AM | 10:50:00 AM | 0:10 | 7 | 0 | 7.00 |
| 10:50:00 AM | 11:00:00 AM | 0:10 | 7.5 | 0 | 7.50 |

**Testhole No.:** 1B
**GPS** 38.70549 -121.04111 **Testhole Depth:** 3' **Width:** 8"

| Start Time | End Time | Elapsed Time | Water-level Start (inches) | Water-level End (inches) | Difference in Water Level (inches) |
|---|---|---|---|---|---|
| 9:00:00 AM | 9:30:00 AM | 0:30 | 12 | 0 | 12.00 |
| 9:30:00 AM | 10:00:00 AM | 0:30 | 12.1 | 0 | 12.10 |
| 10:00:00 AM | 10:10:00 AM | 0:10 | 12.4 | 7.7 | 4.70 |
| 10:10:00 AM | 10:20:00 AM | 0:10 | 6.7 | 4.6 | 2.10 |
| 10:20:00 AM | 10:30:00 AM | 0:10 | 9.3 | 7 | 2.30 |
| 10:30:00 AM | 10:40:00 AM | 0:10 | 7 | 5.1 | 1.90 |
| 10:40:00 AM | 10:50:00 AM | 0:10 | 7.4 | 5.8 | 1.60 |
| 10:50:00 AM | 11:00:00 AM | 0:10 | 7.9 | 6.3 | 1.60 |

**Testhole No.:** 1C
**GPS** 38.70557 -121.04098 **Testhole Depth:** 2' **Width:** 8"

| Start Time | End Time | Elapsed Time | Water-level Start (inches) | Water-level End (inches) | Difference in Water Level (inches) |
|---|---|---|---|---|---|
| 9:00:00 AM | 9:30:00 AM | 0:30 | 7.4 | 0 | 7.40 |
| 9:30:00 AM | 10:00:00 AM | 0:30 | 7.2 | 0 | 7.20 |
| 10:00:00 AM | 10:10:00 AM | 0:10 | 7.6 | 4.2 | 3.40 |
| 10:10:00 AM | 10:20:00 AM | 0:10 | 9 | 5.6 | 3.40 |
| 10:20:00 AM | 10:30:00 AM | 0:10 | 9 | 6 | 3.00 |
| 10:30:00 AM | 10:40:00 AM | 0:10 | 8.5 | 5.7 | 2.80 |
| 10:40:00 AM | 10:50:00 AM | 0:10 | 7.3 | 4.9 | 2.40 |
| 10:50:00 AM | 11:00:00 AM | 0:10 | 7.7 | 5.4 | 2.30 |

**Testhole No.:** 1D
**GPS** 38.70567 -121.04089 **Testhole Depth:** 2.5' **Width:** 8"

| Start Time | End Time | Elapsed Time | Water-level Start (inches) | Water-level End (inches) | Difference in Water Level (inches) |
|---|---|---|---|---|---|
| 9:00:00 AM | 9:30:00 AM | 0:30 | 11 | 0 | 11.00 |
| 9:30:00 AM | 10:00:00 AM | 0:30 | 10.8 | 0 | 10.80 |
| 10:00:00 AM | 10:10:00 AM | 0:10 | 9.3 | 0 | 9.30 |
| 10:10:00 AM | 10:20:00 AM | 0:10 | 12 | 0 | 12.00 |
| 10:20:00 AM | 10:30:00 AM | 0:10 | 11.8 | 0 | 11.80 |
| 10:30:00 AM | 10:40:00 AM | 0:10 | 11.2 | 0 | 11.20 |
| 10:40:00 AM | 10:50:00 AM | 0:10 | 10.9 | 0 | 10.90 |
| 10:50:00 AM | 11:00:00 AM | 0:10 | 11.5 | 0 | 11.50 |

# Percolation Test Data Sheet

**Project No.** E11047.003
**Test Pit No.** GTP-2
**Date:** 6/14/2022
**Testhole No.:** 2A **Sheet No.:** 2 of 3
**GPS** 38.70907 -121.04295 **Testhole Depth:** 2' **Width:** 8"

| Start Time | End Time | Elapsed Time | Water-level Start (inches) | Water-level End (inches) | Difference in Water Level (inches) |
|---|---|---|---|---|---|
| 11:15:00 AM | 11:45:00 AM | 0:30 | 9.3 | 0 | 9.30 |
| 11:45:00 AM | 12:15:00 PM | 0:30 | 9.1 | 0 | 9.10 |
| 12:15:00 PM | 12:25:00 PM | 0:10 | 9 | 0 | 9.00 |
| 12:25:00 PM | 12:35:00 PM | 0:10 | 8.9 | 0 | 8.90 |
| 12:35:00 PM | 12:45:00 PM | 0:10 | 8.6 | 0 | 8.60 |
| 12:45:00 PM | 12:55:00 PM | 0:10 | 9.2 | 0 | 9.20 |
| 12:55:00 PM | 1:05:00 PM | 0:10 | 8.8 | 0 | 8.80 |
| 1:05:00 PM | 1:15:00 PM | 0:10 | 8.7 | 0 | 8.70 |

**Testhole No.:** 2B
**GPS** 38.709 -121.04284 **Testhole Depth:** 1.5' **Width:** 8"

| Start Time | End Time | Elapsed Time | Water-level Start (inches) | Water-level End (inches) | Difference in Water Level (inches) |
|---|---|---|---|---|---|
| 11:15:00 AM | 11:45:00 AM | 0:30 | 9 | 0 | 9.00 |
| 11:45:00 AM | 12:15:00 PM | 0:30 | 8 | 2.1 | 5.90 |
| 12:15:00 PM | 12:45:00 PM | 0:30 | 6.4 | 1.7 | 4.70 |
| 12:45:00 PM | 1:15:00 PM | 0:30 | 8.3 | 4.1 | 4.20 |
| 1:15:00 PM | 1:45:00 PM | 0:30 | 8.6 | 4.7 | 3.90 |
| 1:45:00 PM | 2:15:00 PM | 0:30 | 8.4 | 4.8 | 3.60 |
| 2:15:00 PM | 2:45:00 PM | 0:30 | 7.8 | 4.4 | 3.40 |
| 2:45:00 PM | 3:15:00 PM | 0:30 | 8 | 4.5 | 3.50 |

**Testhole No.:** 2C
**GPS** 38.70893 -121.04274 **Testhole Depth:** 3' **Width:** 8"

| Start Time | End Time | Elapsed Time | Water-level Start (inches) | Water-level End (inches) | Difference in Water Level (inches) |
|---|---|---|---|---|---|
| 11:15:00 AM | 11:45:00 AM | 0:30 | 9 | 0 | 9.00 |
| 11:45:00 AM | 12:15:00 PM | 0:30 | 9.4 | 0 | 9.40 |
| 12:15:00 PM | 12:25:00 PM | 0:10 | 9.1 | 0 | 9.10 |
| 12:25:00 PM | 12:35:00 PM | 0:10 | 9.1 | 0 | 9.10 |
| 12:35:00 PM | 12:45:00 PM | 0:10 | 8.5 | 0 | 8.50 |
| 12:45:00 PM | 12:55:00 PM | 0:10 | 8.8 | 0 | 8.80 |
| 12:55:00 PM | 1:05:00 PM | 0:10 | 9.5 | 0 | 9.50 |
| 1:05:00 PM | 1:15:00 PM | 0:10 | 9.3 | 0 | 9.30 |

**Testhole No.:** 2D
**GPS** 38.70886 -121.04264 **Testhole Depth:** 2.5' **Width:** 8"

| Start Time | End Time | Elapsed Time | Water-level Start (inches) | Water-level End (inches) | Difference in Water Level (inches) |
|---|---|---|---|---|---|
| 11:15:00 AM | 11:45:00 AM | 0:30 | 9.5 | 0 | 9.50 |
| 11:45:00 AM | 12:15:00 PM | 0:30 | 9.7 | 0 | 9.70 |
| 12:15:00 PM | 12:25:00 PM | 0:10 | 9.1 | 0 | 9.10 |
| 12:25:00 PM | 12:35:00 PM | 0:10 | 9.3 | 0 | 9.30 |
| 12:35:00 PM | 12:45:00 PM | 0:10 | 9.6 | 0 | 9.60 |
| 12:45:00 PM | 12:55:00 PM | 0:10 | 9.1 | 0 | 9.10 |
| 12:55:00 PM | 1:05:00 PM | 0:10 | 9.2 | 0 | 9.20 |
| 1:05:00 PM | 1:15:00 PM | 0:10 | 9.5 | 0 | 9.50 |

# Percolation Test Data Sheet

**Project No.** E11047.003
**Test Pit No.** GTP-3
**Date:** 6/14/2022
**Testhole No.:** 3A **Sheet No.:** 3 of 3
**GPS** 38.71163 -121.04404 **Testhole Depth:** 2' **Width:** 8"

| Start Time | End Time | Elapsed Time | Water-level Start (inches) | Water-level End (inches) | Difference in Water Level (inches) |
|---|---|---|---|---|---|
| 3:30:00 PM | 4:00:00 PM | 0:30 | 9 | 7.5 | 1.50 |
| 4:00:00 PM | 4:30:00 PM | 0:30 | 7.5 | 5.9 | 1.60 |
| 4:30:00 PM | 5:00:00 PM | 0:30 | 5.9 | 4.3 | 1.60 |
| 5:00:00 PM | 5:30:00 PM | 0:30 | 7.3 | 6.1 | 1.20 |
| 5:30:00 PM | 6:00:00 PM | 0:30 | 6.1 | 4.9 | 1.20 |
| 6:00:00 PM | 6:30:00 PM | 0:30 | 7.4 | 6.4 | 1.00 |
| 6:30:00 PM | 7:00:00 PM | 0:30 | 6.4 | 5.5 | 0.90 |
| 7:00:00 PM | 7:30:00 PM | 0:30 | 5.5 | 4.5 | 1.00 |

**Testhole No.:** 3B
**GPS** 38.71156 -121.04396 **Testhole Depth:** 2.5' **Width:** 8"

| Start Time | End Time | Elapsed Time | Water-level Start (inches) | Water-level End (inches) | Difference in Water Level (inches) |
|---|---|---|---|---|---|
| 3:30:00 PM | 4:00:00 PM | 0:30 | 9.6 | 2.5 | 7.10 |
| 4:00:00 PM | 4:30:00 PM | 0:30 | 10.5 | 3.5 | 7.00 |
| 4:30:00 PM | 5:00:00 PM | 0:30 | 10.5 | 4 | 6.50 |
| 5:00:00 PM | 5:30:00 PM | 0:30 | 9.7 | 4.1 | 5.60 |
| 5:30:00 PM | 6:00:00 PM | 0:30 | 9.5 | 4 | 5.50 |
| 6:00:00 PM | 6:30:00 PM | 0:30 | 9.3 | 3.8 | 5.50 |
| 6:30:00 PM | 7:00:00 PM | 0:30 | 9 | 3.6 | 5.40 |
| 7:00:00 PM | 7:30:00 PM | 0:30 | 9.8 | 4.3 | 5.50 |

**Testhole No.:** 3C
**GPS** 38.7115 -121.0439 **Testhole Depth:** 1.5' **Width:** 8"

| Start Time | End Time | Elapsed Time | Water-level Start (inches) | Water-level End (inches) | Difference in Water Level (inches) |
|---|---|---|---|---|---|
| 3:30:00 PM | 4:00:00 PM | 0:30 | 8.2 | 3.3 | 4.90 |
| 4:00:00 PM | 4:30:00 PM | 0:30 | 8.3 | 4.4 | 3.90 |
| 4:30:00 PM | 5:00:00 PM | 0:30 | 7.9 | 4.3 | 3.60 |
| 5:00:00 PM | 5:30:00 PM | 0:30 | 6.2 | 2.9 | 3.30 |
| 5:30:00 PM | 6:00:00 PM | 0:30 | 6.8 | 3.6 | 3.20 |
| 6:00:00 PM | 6:30:00 PM | 0:30 | 7.1 | 4 | 3.10 |
| 6:30:00 PM | 7:00:00 PM | 0:30 | 7 | 3.8 | 3.20 |
| 7:00:00 PM | 7:30:00 PM | 0:30 | 6.5 | 3.4 | 3.10 |

**Testhole No.:** 3D
**GPS** 38.71142 -121.04383 **Testhole Depth:** 1.5' **Width:** 8"

| Start Time | End Time | Elapsed Time | Water-level Start (inches) | Water-level End (inches) | Difference in Water Level (inches) |
|---|---|---|---|---|---|
| 3:30:00 PM | 4:00:00 PM | 0:30 | 6.5 | 0 | 6.50 |
| 4:00:00 PM | 4:30:00 PM | 0:30 | 6.8 | 0 | 6.80 |
| 4:30:00 PM | 5:00:00 PM | 0:30 | 6.4 | 0 | 6.40 |
| 5:00:00 PM | 5:30:00 PM | 0:30 | 6.3 | 0 | 6.30 |
| 5:30:00 PM | 6:00:00 PM | 0:30 | 6.6 | 0 | 6.60 |
| 6:00:00 PM | 6:30:00 PM | 0:30 | 6 | 0 | 6.00 |
| 6:30:00 PM | 7:00:00 PM | 0:30 | 6.4 | 0 | 6.40 |
| 7:00:00 PM | 7:30:00 PM | 0:30 | 6.2 | 0 | 6.20 |

***Appendix B***
*Custom Soil Resource Report for*
*El Dorado Area, California*

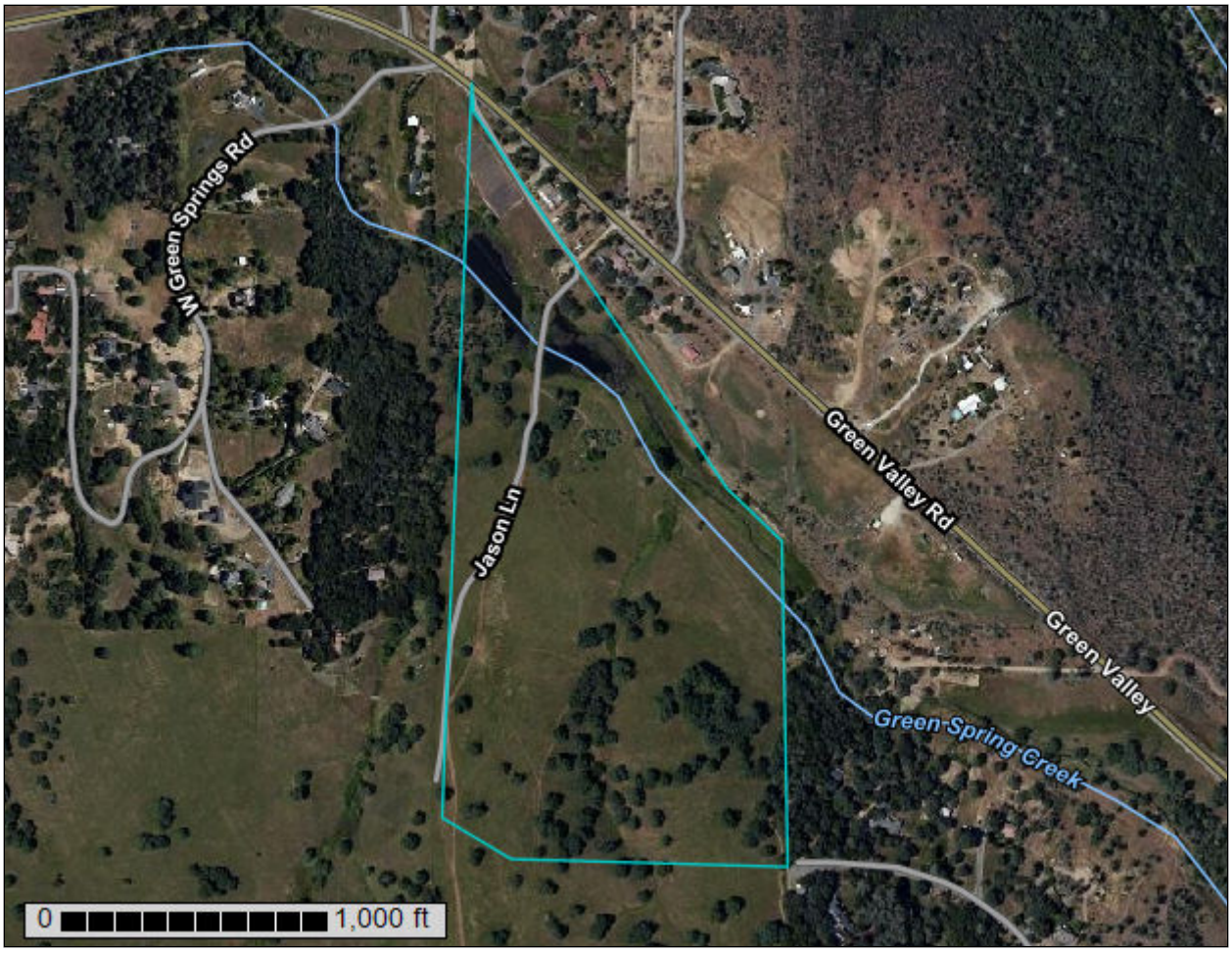
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for El Dorado Area, California




June 27, 2022

# Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

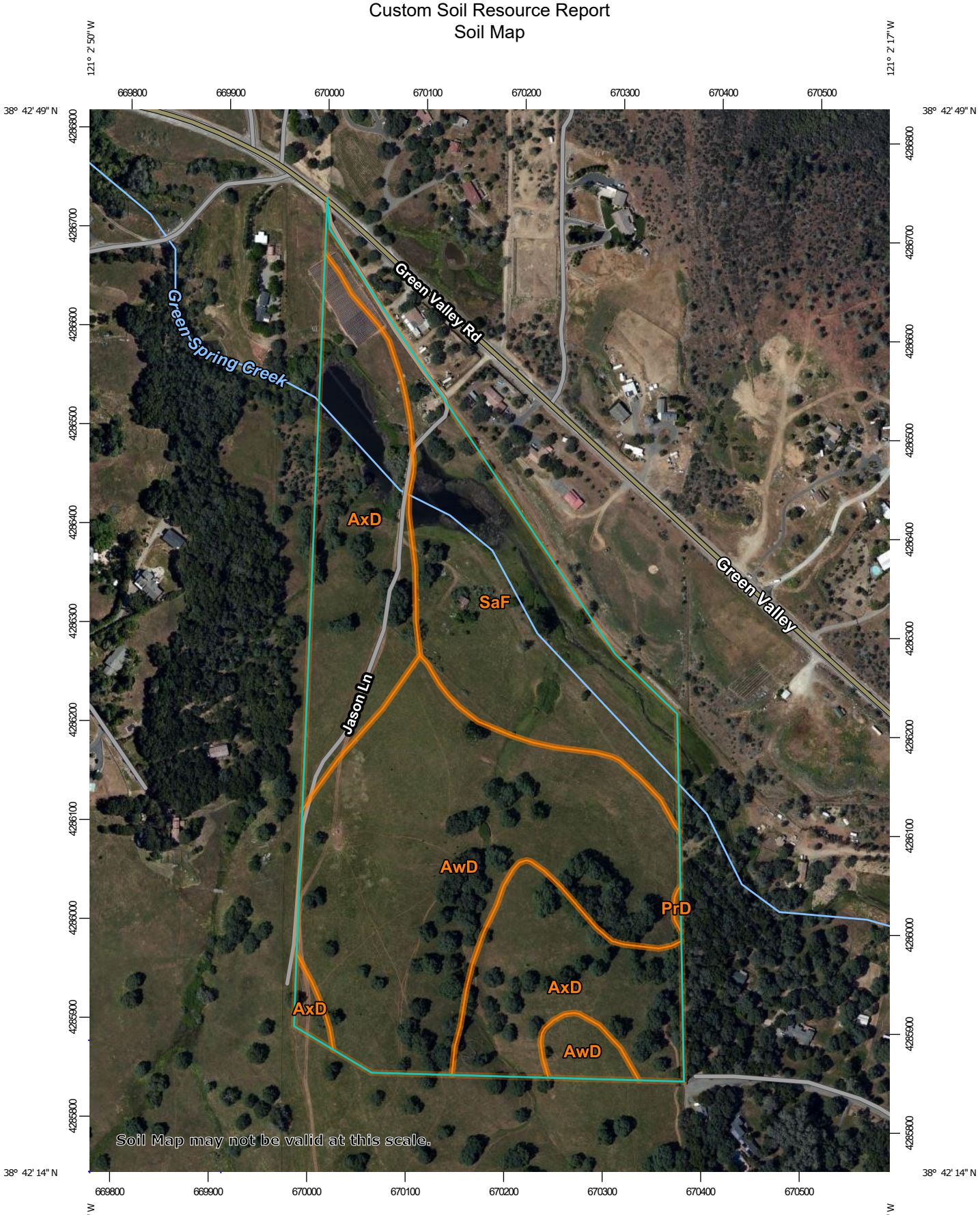
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report
## Soil Map




Map Scale: 1:5,230 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

## MAP LEGEND

**Area of Interest (AOI)**
- Area of Interest (AOI)

**Soils**
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**Water Features**
- Streams and Canals

**Transportation**
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**
- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: El Dorado Area, California
Survey Area Data: Version 13, Sep 3, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 8, 2019—May 12, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| AwD | Auburn silt loam, 2 to 30 percent slopes | 23.9 | 42.1% |
| AxD | Auburn very rocky silt loam, 2 to 30 percent slopes | 18.9 | 33.4% |
| PrD | Placer diggings | 0.1 | 0.1% |
| SaF | Serpentine rock land | 13.8 | 24.4% |
| **Totals for Area of Interest** | | **56.7** | **100.0%** |

# Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# El Dorado Area, California

## AwD—Auburn silt loam, 2 to 30 percent slopes

### Map Unit Setting

*National map unit symbol:* hhyq
*Elevation:* 120 to 3,000 feet
*Mean annual precipitation:* 20 to 40 inches
*Mean annual air temperature:* 55 to 63 degrees F
*Frost-free period:* 175 to 275 days
*Farmland classification:* Not prime farmland

### Map Unit Composition

*Auburn and similar soils:* 85 percent
*Minor components:* 15 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Auburn

#### Setting

*Landform:* Hills
*Landform position (two-dimensional):* Backslope
*Landform position (three-dimensional):* Side slope
*Down-slope shape:* Concave
*Across-slope shape:* Convex
*Parent material:* Residuum weathered from basic igneous rock and/or basic residuum weathered from metamorphic rock

#### Typical profile

*H1 - 0 to 14 inches:* silt loam
*H2 - 14 to 18 inches:* unweathered bedrock

#### Properties and qualities

*Slope:* 2 to 30 percent
*Depth to restrictive feature:* 14 to 18 inches to lithic bedrock
*Drainage class:* Well drained
*Runoff class:* Low
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Available water supply, 0 to 60 inches:* Very low (about 2.3 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 6e
*Land capability classification (nonirrigated):* 6e
*Hydrologic Soil Group:* D
*Ecological site:* F018XI200CA - Low Elevation Foothills 18-25 PZ
*Hydric soil rating:* No

### Minor Components

#### Argonaut

*Percent of map unit:* 4 percent
*Landform:* Ridges

*Landform position (two-dimensional):* Shoulder
*Landform position (three-dimensional):* Interfluve
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

**Perkins**

*Percent of map unit:* 4 percent
*Hydric soil rating:* No

**Sobrante**

*Percent of map unit:* 4 percent
*Landform:* Hillslopes
*Landform position (two-dimensional):* Backslope
*Landform position (three-dimensional):* Side slope
*Down-slope shape:* Concave
*Across-slope shape:* Convex
*Hydric soil rating:* No

**Rock outcrop**

*Percent of map unit:* 3 percent
*Hydric soil rating:* No

## AxD—Auburn very rocky silt loam, 2 to 30 percent slopes

### Map Unit Setting

*National map unit symbol:* hhyr
*Elevation:* 120 to 3,000 feet
*Mean annual precipitation:* 20 to 40 inches
*Mean annual air temperature:* 55 to 63 degrees F
*Frost-free period:* 175 to 275 days
*Farmland classification:* Not prime farmland

### Map Unit Composition

*Auburn and similar soils:* 75 percent
*Rock outcrop:* 15 percent
*Minor components:* 10 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Auburn

#### Setting

*Landform:* Hills
*Landform position (two-dimensional):* Backslope
*Landform position (three-dimensional):* Side slope
*Down-slope shape:* Concave
*Across-slope shape:* Convex
*Parent material:* Residuum weathered from basic igneous rock and/or basic residuum weathered from metamorphic rock

**Typical profile**

*H1 - 0 to 14 inches:* silt loam
*H2 - 14 to 18 inches:* unweathered bedrock

**Properties and qualities**

*Slope:* 2 to 30 percent
*Depth to restrictive feature:* 14 to 18 inches to lithic bedrock
*Drainage class:* Well drained
*Runoff class:* Medium
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Available water supply, 0 to 60 inches:* Very low (about 2.3 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 6e
*Land capability classification (nonirrigated):* 6e
*Hydrologic Soil Group:* D
*Ecological site:* R018XD076CA - SHALLOW LOAMY
*Hydric soil rating:* No

## Description of Rock Outcrop

**Setting**

*Parent material:* Metamorphic rock

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 8
*Hydric soil rating:* No

## Minor Components

**Argonaut**

*Percent of map unit:* 3 percent
*Landform:* Ridges
*Landform position (two-dimensional):* Shoulder
*Landform position (three-dimensional):* Interfluve
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

**Boomer**

*Percent of map unit:* 3 percent
*Landform:* Mountain slopes, hillslopes
*Landform position (two-dimensional):* Backslope
*Landform position (three-dimensional):* Mountainflank, side slope
*Down-slope shape:* Concave
*Across-slope shape:* Convex
*Hydric soil rating:* No

**Sobrante**

*Percent of map unit:* 2 percent
*Landform:* Hillslopes
*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope
*Down-slope shape:* Concave
*Across-slope shape:* Convex
*Hydric soil rating:* No

**Unnamed**
*Percent of map unit:* 2 percent
*Hydric soil rating:* No

## PrD—Placer diggings

**Map Unit Composition**
*Placer diggings:* 90 percent
*Minor components:* 10 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Placer Diggings**

**Setting**
*Parent material:* Alluvium derived from mixed sources

**Typical profile**
*H1 - 0 to 60 inches:* fine sandy loam, cobbles

**Properties and qualities**
*Slope:* 2 to 15 percent
*Runoff class:* Low
*Capacity of the most limiting layer to transmit water (Ksat):* High to very high (5.95 to 19.98 in/hr)
*Frequency of flooding:* OccasionalNone
*Available water supply, 0 to 60 inches:* Very low (about 1.2 inches)

**Interpretive groups**
*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 8
*Ecological site:* R018XD084CA - PLACER DIGGINGS
*Hydric soil rating:* No

**Minor Components**

**Unnamed**
*Percent of map unit:* 10 percent
*Landform:* Channels
*Hydric soil rating:* Yes

## SaF—Serpentine rock land

### Map Unit Setting

*National map unit symbol:* hj15
*Elevation:* 650 to 4,000 feet
*Mean annual precipitation:* 8 to 15 inches
*Mean annual air temperature:* 45 to 52 degrees F
*Frost-free period:* 110 to 180 days
*Farmland classification:* Not prime farmland

### Map Unit Composition

*Serpentine rock land:* 90 percent
*Minor components:* 10 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Serpentine Rock Land

#### Setting

*Parent material:* Serpentinite

#### Typical profile

*H1 - 0 to 4 inches:* unweathered bedrock

#### Properties and qualities

*Slope:* 15 to 70 percent
*Depth to restrictive feature:* 0 to 4 inches to lithic bedrock
*Runoff class:* Very high
*Capacity of the most limiting layer to transmit water (Ksat):* Low to very high (0.01 to 19.98 in/hr)
*Available water supply, 0 to 60 inches:* Very low (about 0.0 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 8
*Hydric soil rating:* No

### Minor Components

#### Unnamed

*Percent of map unit:* 10 percent
*Hydric soil rating:* No

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# Appendix E

Phase I Environmental Site Assessment

# Phase I Environmental Site Assessment

## Generations Residential Development

### 3200 Verde Valle Lane, 1856 Green Valley Road, and Other Unreported Addresses, El Dorado Hills, California

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May 9, 2024

Project Number C077.001.001

File: rpt-PhaseIESA-ElDoradoHills-C077-001-001

terraphase engineering

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# Acronyms and Abbreviations

| | |
|---|---|
| AAI | All Appropriate Inquiries |
| APN | Assessor's Parcel Number |
| AST | aboveground storage tank |
| ASTM | ASTM International |
| AUL | activity and land use limitation |
| Client | Green Valley Road Benefits, LLC |
| CREC | controlled recognized environmental condition |
| DTSC | Department of Toxic Substances Control |
| EDR | Environmental Data Resources Inc. |
| EDR report | *EDR Radius Map™ Report with GeoCheck®* |
| ESA | Environmental Site Assessment |
| LUST | Leaking Underground Storage Tank |
| MRDS | Mineral Resources Data System |
| NFA | No Further Action |
| PCB | polychlorinated biphenyl |
| REC | recognized environmental condition |
| Sanborn® maps | Sanborn® fire insurance maps |
| SLIC | Spills Leaks and Investigation Cleanup |
| subject property | 3200 Verde Valle Lane, 1856 Green Valley Road, and other unreported addresses in El Dorado Hills, California |
| Terraphase | Terraphase Engineering Inc. |
| USACE | United States Army Corps of Engineers |
| USEPA | United States Environmental Protection Agency |
| USGS | United States Geological Survey |
| User | Green Valley Road Benefits, LLC |
| UST | underground storage tank |

# Executive Summary

Terraphase Engineering Inc. (Terraphase) performed a Phase I Environmental Site Assessment (ESA) of the Generations Residential Development property located at 3200 Verde Valle Lane, 1856 Green Valley Road, and other unreported addresses, in El Dorado Hills, El Dorado County, California (subject property; Figure 1), on behalf of Green Valley Road Benefits, LLC (Client), in accordance with Terraphase's proposal dated April 8, 2024.

The approximately 280-acre subject property is comprised of five parcels identified as El Dorado County Assessor's Parcel Numbers 126-020-001, 126-020-002, 126-020-003, 126-020-004, and 126-150-023, and is developed with a single-family residence and a vacant residence, with the remaining portions comprised of undeveloped forested land.

Based on a review of historical documents, the subject property has been undeveloped since at least 1940, and has historically been utilized for agricultural, grazing, and forested land. The subject property is currently mixed use, rural residential and forested land. The vacant residence in the northern parcel was first observed in 1940, along with additional structures observed in the current location of 3200 Verde Valle Lane. The vacant residence appeared dilapidated and fallen to disrepair. Several equipment sheds were observed in the vicinity of the vacant residence containing two paint cans and a car battery, with no staining observed. In the surrounding vicinity, two empty propane tanks, a car battery, and used tires were observed; no staining was observed. The single-family residence at 3200 Verde Valle Lane is currently occupied and the interior was not accessed during the site reconnaissance. The subject property's addresses were not identified in the *EDR Radius Map™ Report with Geocheck®* (Environmental Data Resources Inc. 2024a).

Based on review of historical documents, adjoining properties have remained generally undeveloped since at least 1940; residential development began in the northern and eastern-adjoining properties around 1984, in the southern-adjoining property around 2016, and in the western-adjoining properties around 2006.

The Phase I ESA was performed in general conformance with the scope and limitations of ASTM International (ASTM) E1527-21, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (2021). Any exceptions to, or deletions from, ASTM E1527-21 are described in Section 1 of this report.

## Recognized Environmental Conditions

Terraphase identified no recognized environmental conditions (RECs)[1] during this Phase I ESA.

[1] According to ASTM E1527-21, a REC is defined as "(1) the presence of *hazardous substances* or *petroleum products* in, on, or at the *subject property* due to a *release* to the *environment*; (2) the likely presence of *hazardous substances* or *petroleum products* in, on, or at the *subject property* due to a *release* or likely *release* to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment."

Terraphase identified no controlled RECs during this Phase I ESA.

## Historical Recognized Environmental Conditions

Terraphase identified no historical RECs during this Phase I ESA.

## Significant Data Gaps

Terraphase identified the following significant data gap during this Phase I ESA:

- A pit partially filled with water and debris was observed on APN 126-150-023 (1856 Green Valley Road) in the vicinity of the vacant residence. A discarded appliance and various piping were observed within the pit. No staining, odors, or sheens were observed. Based on historical usage of pits as disposal areas, and the unknown contents of this location, the unknown pit is considered a significant data gap.

## De Minimis Conditions

Terraphase identified no de minimis conditions during this Phase I ESA.

# 1 Introduction

At the request of Green Valley Road Benefits, LLC (Client), Terraphase Engineering Inc. (Terraphase) has completed a Phase I Environmental Site Assessment (ESA) of the Generations Residential Development property at 3200 Verde Valle Lane, 1856 Green Valley Road, and other unreported addresses, in El Dorado Hills, El Dorado County, California (subject property; Figure 1).

This Phase I ESA includes information gathered from federal, state, and local agencies; review of historical documents; a reconnaissance visit; and interviews. A significant amount of the regulatory and historical database information was provided by Environmental Data Resources Inc. (EDR), a third-party vendor that specializes in providing regulatory and historical records for Phase I ESAs. The qualifications of the environmental professional(s) who prepared this report are included in Section 9.

## 1.1 Purpose

This Phase I ESA was conducted in general accordance with ASTM International (ASTM) E1527-21, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (2021), ASTM E2247-16, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property (2016), and United States Environmental Protection Agency (USEPA) 40 CFR 312, "Innocent Landowners, Standards for Conducting All Appropriate Inquiries"[2] (AAI) rule, adopted November 1, 2006, and most recently amended December 15, 2022.[3]

This Phase I ESA assesses for recognized environmental conditions (RECs) at the subject property. As defined by ASTM E1527-21, a REC is "(1) the presence of *hazardous substances* or *petroleum products* in, on, or at the *subject property* due to a *release* to the *environment*; (2) the likely presence of *hazardous substances* or *petroleum products* in, on, or at the *subject property* due to a *release* or likely *release* to the *environment*; or (3) the presence of *hazardous substances* or *petroleum products* in, on, or at the *subject property* under conditions that pose a *material threat* of a future *release* to the *environment*." The term includes hazardous substances or petroleum products even under conditions in compliance with local, state, and federal laws (e.g., permitted discharges).

A controlled REC (CREC) is defined as a REC "affecting the *subject property* that has been addressed to the satisfaction of the applicable regulatory authority or authorities with *hazardous substances* or *petroleum products* allowed to remain in place subject to implementation of required controls (e.g., *activity and use limitations [AULs]* or other *property use limitations*)."

A historical REC is defined as "a previous *release of hazardous substances* or *petroleum products* affecting the *subject property* that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory

[2] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-J/part-312.

[3] The "AAI rule," as defined under CERCLA, https://www.federalregister.gov/documents/2022/12/15/2022-27044/standards-and-practices-for-all-appropriate-inquiries

authority or authorities without subjecting the *subject property* to any controls (for example, *AULs* or other *property use limitations)*."

## 1.2 Scope of Services

The Client has engaged Terraphase to perform this Phase I ESA to identify RECs (as defined in ASTM E1527-21) to help identify potential environmental liabilities associated with the subject property prior to a potential transaction.

The following services were included in this Phase I ESA:

- Interviews with past and present owners, operators, and occupants familiar with the subject property;
- Review of historical sources of information including, but not limited to, aerial photographs, Sanborn® fire insurance maps (Sanborn® maps), and land use records;
- Review of previously conducted environmental studies;
- Review of government records, including regulatory reports for both the subject property and adjoining properties;
- Review of an environmental database search;
- Review of local regulatory agency files, including the local fire department and other local government entities that have jurisdiction over hazardous waste management, permitting, and site investigations;
- Reconnaissance level visual inspection of the subject property, including observations of adjoining properties and general land uses, to look for evidence of the release(s) of hazardous materials and petroleum products and assess the potential for on-site releases of hazardous materials and petroleum products resulting from current and historical land use activities and nearby operations;
- Subject property and adjoining property photographs to document current conditions; and
- Preparation of a report that documents our research, observations, and the results of the environmental inquiry, which specifically identifies any properties that will require invasive site investigation, including a summary of conclusions.

Although not included in the standard Phase I scope, as defined in ASTM E1527-21, Terraphase conducted a vapor encroachment screen for the subject property in accordance with the ASTM E2600-22, *Standard Guide for Vapor Encroachment Screening (VES) on Property Involved in Real Estate Transactions* (2022).

Non-scope considerations as defined in ASTM E1527-21 (e.g., asbestos, biological agents, cultural and historical resources, ecological resources, endangered species, health and safety, indoor air quality unrelated to releases of hazardous substances or petroleum products into the environment, industrial hygiene, testing of building materials for presence of lead-based paint or polychlorinated biphenyls [PCBs], lead in drinking water, mold, radon, regulatory compliance, wetlands, compliance with AULs, etc.) are considered beyond the scope of standard practice.

## 1.3 Significant Assumptions

This Phase I ESA provides appropriate inquiry into the previous ownership and use of the subject property consistent with good commercial and customary practice to minimize liability. Terraphase also assumes that the information provided by the Client, regulatory database provider, and regulatory agencies, is true and reliable.

## 1.4 Limitations and Exceptions

The opinions and recommendations presented in this report are based upon the scope of services, information obtained through the performance of the services, and the schedule as agreed upon by Terraphase and the Client. This report was prepared in accordance with the generally accepted standards and level of skill and care under similar conditions and circumstances established by the environmental consulting industry as practiced in California. To the extent that Terraphase relied upon any information prepared by other parties not under contract to Terraphase, no representation as to the accuracy or completeness of such information is made.

The findings presented in this report apply solely to conditions existing at the time of the assessment. It must be recognized, however, that a Phase I ESA is intended for the purpose of evaluating the potential for contamination through limited research and investigative activities, and in no way represents a conclusive or complete characterization. Conditions in other parts of the subject property may vary from those at the locations where data were collected.

Terraphase notes that this Phase I ESA is not intended to meet provisions of the limited liability protections beyond the AAI and as stated in ASTM E1527-21: “there are likely to be other legal obligations with regard to hazardous substances or petroleum products discovered in, on, or at the subject property that are not addressed in this practice and that may pose risks of civil and/or criminal sanctions for noncompliance.”

Terraphase’s interpretation of investigation results is related to the availability of the data and the extent of the investigation activities; 100 percent confidence in Phase I ESA conclusions cannot reasonably be achieved. Therefore, Terraphase does not provide any guarantees, certifications, or warranties (expressed or implied) that a property is free from environmental contamination. Furthermore, nothing contained in this document shall relieve any other party of its responsibility to abide by contract documents and all applicable laws, codes, regulations, or standards.

## 1.5 Environmental Site Assessment Viability

According to ASTM E1527-21, Section 4.6, a Phase I ESA is presumed viable when the following components were performed or updated within 180 days prior to the date of property acquisition or the date of the intended transaction:

- Interviews with owners, operators, and occupants (completed April 18, 2024);
- Searches for recorded environmental cleanup liens (completed April 15, 2024);
- Review of federal, tribal, state, and local government records (completed April 13, 2024);

- Site reconnaissance of the subject property and of adjoining properties (completed April 18, 2024); and
- The declaration by the environmental professional responsible for the assessment or update (Section 10).

After 180 days but within 1 year prior to the date of acquisition, the report must be updated in accordance with ASTM E1527-21 and federal regulations. The 180-day or 1-year timeframe begins with the date upon which the first of five components of the Phase I ESA was completed.

## 1.6 Deviations

In performance of this Phase I ESA, Terraphase has identified no exceptions, deletions, or deviations from ASTM E1527-21.

## 1.7 User Reliance

This document was prepared for the use of the Client. No other party should rely on the information contained herein without the prior written consent of Terraphase and the Client.

# 2 Client/User Provided Information

This section describes information provided to Terraphase by the Client (i.e., the "User" of this Phase I ESA).

## 2.1 Environmental Liens

The User indicated no environmental liens filed or recorded against the subject property under federal, tribal, state, or local law were identified in association with the subject property.

## 2.2 Activity and Use Limitations

The User indicated no AULs such as engineering controls, land use restrictions or institutional controls are in place at the subject property and/or have been filed or recorded against the subject property under federal, tribal, state, or local law.

## 2.3 Specialized Knowledge

The User has no specialized knowledge (as defined in the AAI rule) regarding the subject property.

## 2.4 Commonly Known or Reasonable Ascertainable Information

The User provided commonly known or reasonably ascertainable information (as defined in the AAI rule) regarding the subject property. This information is discussed further in Section 4.7.

## 2.5 Valuation Reduction for Environmental Contamination

The User did not indicate the valuation of the subject property has been reduced or otherwise impacted due to the presence of releases or threatened releases of hazardous substances (as defined in the AAI rule) at the subject property.

## 2.6 Reasons for Performing Phase I ESA

Terraphase has been engaged by the Client to perform this Phase I ESA for the subject property (as defined in ASTM E1527-21) to identify potential environmental liabilities prior to a potential transaction.

# 3 Site Description and Reconnaissance

The subject property's current conditions and operations, historical use, and physical setting are discussed in this section, as well as observations made by Terraphase during the site reconnaissance.

## 3.1 Site Description

The subject property, located at 3200 Verde Valle Lane and 1856 Green Valley Road in El Dorado Hills, El Dorado County, California (Figure 1), is identified as El Dorado County Assessor's Parcel Numbers (APNs) 126-020-001, 126-020-002, 126-020-003, 126-020-004, and 126-150-023.

The approximately 280-acre subject property is partially developed with a single-family residence on the central portion, a vacant residence on the northeast portion, and undeveloped and forest land on the southeast and southwest portions (Figure 2).

## 3.2 Current Site Operations

The table below identifies the current use of each subject property parcel:

| APN | Use/Operation |
|---|---|
| 126-020-001 | Single-family residence |
| 126-150-023 | Vacant residence |
| 126-020-002 | Undeveloped forestland |
| 126-020-003 | Undeveloped |
| 126-020-004 | Undeveloped |

## 3.3 Site Observations

On April 18, 2024, Stephanie Duong and Joshua Hansel of Terraphase conducted reconnaissance of the subject property to assess current land-use activities and environmental conditions. The subject property reconnaissance was documented with notes and photographs. Observations made during the reconnaissance are discussed below, and a photographic log is provided as Appendix A. The focus of a reconnaissance is to identify conditions that have the potential to cause adverse environmental impacts.

During the site reconnaissance, Terraphase was accompanied by Derek Spalding, property owner and owner of The True Life Companies, the Client-designated subject property contact. Terraphase accessed subject property building interiors that were within the scope of future development as well as exterior areas.

As part of the reconnaissance, Terraphase searched for evidence of the presence, use, or storage of hazardous substances and petroleum products including, but not limited to, areas of disturbed or discolored soil; suspect equipment and/or building materials which may contain hazardous substances or petroleum products; areas of distressed vegetation; wastewater discharge areas; evidence of storage

tanks/septic systems; waste management/disposal areas; lagoons, pits, or sumps; surface water management areas; and stained surfaces, etc.

Most subject property buildings and equipment storage areas are located on 1856 Green Valley Road, the northeastern parcel identified as APN 126-150-023. The following was observed on the northeastern portion of the subject property:

- A corroded, wooden equipment shed on the center of the parcel with two rusted paint cans (one empty and one full) and one car battery. No spills or staining were observed in the vicinity of the containers. Two ponds were observed in the northern portion of the parcel.
- A vacant, deteriorating, 1,000-square-foot single-family residence was observed on the center of the parcel, southeast of the wooden equipment shed. The vacant residence interior was not accessed due to potential safety hazards of the building but was observed from the exterior. The residence was equipped with a distribution transformer with no signs of spills or leaks. An electric-powered domestic well was on the south side of the residence and one empty propane tank was observed inside the residence.
- Various waste, tires, and one empty propane tank were observed in the backyard area southeast of the vacant residence.
- A pit partially filled with water was observed southwest of the vacant residence.

Previously identified fuel tanks associated with the former agricultural operations on the northern side of APN 126-150-023 were not observed during the site reconnaissance.

A monitoring well was observed on the southern end of APN 126-020-003. The subject property contact was unaware of its usage (either domestic or agricultural).

The interior of the occupied residence at 3200 Verde Valle Lane, identified as APN 126-020-001, was not accessed during the site reconnaissance.

The northern portion of APN 126-020-002 was not accessed due to the uneven forested terrain. The parcel was observed from the east and south perspectives.

Specific observations for elements indicative of current and historical usage of hazardous substances and/or petroleum products are provided below.

| **Element** | **Observation** |
|---|---|
| Current or former underground storage tanks (USTs) | Terraphase observed no evidence of current or former USTs (e.g., vent pipes, fill ports, patches, etc.) at the subject property. Mr. Spalding was unaware of current or former USTs at the subject property. |
| Current or former aboveground storage tanks (ASTs) and silos | Terraphase did not observe any current ASTs or silos at the subject property. Terraphase observed no evidence of former ASTs or silos (e.g., concrete pads with an unconfirmed use). Mr. Spalding was unaware of current or former ASTs at the subject property. |
| PCB-containing equipment | Terraphase observed one distribution transformer mounted to a powerline at the vacant residence with no evidence of leaking or staining. |
| Current and former hazardous materials and/or | Terraphase observed the following consumer products at the subject property: |

| Element | Observation |
|---|---|
| petroleum product use/storage | • Two rusted 1-gallon paint cans (one empty and one full)<br>• Two car batteries<br>• Three empty propane tanks<br>No staining or odors were observed. |
| Hazardous waste | Terraphase observed no hazardous waste generated at the subject property. |
| Drums, totes, and intermediate bulk containers | Terraphase observed no drums, totes, or other containers at the subject property, except for those discussed above. Terraphase observed no unidentified containers at the subject property. |
| Non-hazardous solid waste (on-site disposal) | Terraphase observed no evidence of on-site solid waste disposal at the subject property (i.e., areas that appear graded by non-natural causes suggesting trash, construction debris, demolition debris, or other solid waste disposal on site). |
| Non-hazardous solid waste (Generation) | Mr. Spalding stated waste generated at the subject property is limited to municipal waste. Terraphase did not observe dumpsters during the site reconnaissance. |
| Wastewater | Sanitary wastewater from the occupied residence is discharged to a septic system. Further details were not known to the subject property contact. |
| Floor drains, sumps, and drywells | Terraphase observed no floor drains, sumps, or dry wells within the on-site buildings. |
| Odors | Terraphase observed no strong, pungent, or noxious odors during the site reconnaissance. |
| Stains, pitting, or corrosion interior areas | Terraphase identified no significant staining or corrosion on the interior areas (floors, walls, and ceilings) during the site reconnaissance. |
| Stained or corroded exterior areas | Terraphase identified significant corrosion on the exterior surface areas of one shed during the site reconnaissance. |
| Pools of liquid | Terraphase identified standing surface water in the pit behind the vacant residence during the site reconnaissance. |
| Pits, ponds, or lagoons | Terraphase identified two ponds and one pit at the subject property during the site reconnaissance. |
| Stressed vegetation | Terraphase did not observe stressed vegetation. |
| Stormwater | Stormwater from the subject property flows throughout the parcels and either infiltrates the unpaved surface or flows to the two ponds in the north or Green Spring Creek to the northeast of the subject property |
| On-site wells | Terraphase identified one domestic well (out of use) and one monitoring well at the subject property. |
| Septic systems | A septic system is attached to the occupied residence at 3200 Verde Valle Lane. Further details were not known to the subject property contact. |
| Heating/Cooling | Heating and cooling systems associated with the occupied residence were not known to the subject property contact. |
| Other petroleum product transmission/storage | No petroleum product transmission or storage was identified at the subject property during the reconnaissance. |

## 3.4 Site Utilities

The occupied building heating and cooling systems were unknown to the subject property contact. Utility service providers at the subject property include the following:

| Utility | Service Provider |
|---|---|
| Electricity | Unknown to the subject property contact |
| Natural gas | Unknown to the subject property contact |
| Sanitary wastewater disposal | On-site sanitary septic system |
| Industrial wastewater disposal | Not generated at the subject property |
| Drinking water supply | Unknown to the subject property contact |
| Solid (non-hazardous) waste disposal | Unknown to the subject property contact |
| Hazardous waste disposal | Not generated at the subject property |

## 3.5 Site Physical Setting

The following subsections briefly describe the regional geology and hydrogeology of the subject property and the surrounding area.

### 3.5.1 Topography and Hydrology

Based on field observations, review of the United States Geographical Survey (USGS) 7.5-minute topographic maps provided by EDR, and the *EDR Radius Map™ Report with Geocheck®* (EDR report; Appendix B), the subject property is situated approximately 1,102 feet above mean sea level and is relatively flat. The local topography is generally mountainous towards the east and flat towards the west, gradually sloping downward towards Folsom Lake to the west/northwest.

The nearest surface water to the subject property is Green Spring Creek, northeast adjacent to the subject property. Bass Lake is approximately 1.7 miles southeast of the subject property at its nearest point. Folsom Lake, a large water body, is more than 3 miles northwest of the subject property at its nearest point.

### 3.5.2 Geology and Hydrogeology

Based on information accessed via the USGS website,[4] the majority of the subject property is underlain by ultramafic rocks, which consists of mostly serpentine. According to soil data accessed on the EDR report, the soils at the subject property primarily consist of silt loam, well-drained with little to no risk of flooding.

The subject property does not overlay a groundwater basin.[5]

[4] https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

[5] https://gis.water.ca.gov/app/bbat/

According to the EDR report, no federal USGS wells were identified within 1 mile of the subject property.

## 3.6 Adjoining Property Observations

During the reconnaissance, Terraphase observed the adjoining properties from public roadways and the subject property. The purpose of these observations was to identify obvious uses or conditions at the adjoining properties likely indicative of a REC or environmental concern for the subject property.

The subject property is in a generally rural and residential area. The subject property is bounded to the north by residences surrounding Verde Valle Lane, West Green Springs Road, Rocky Springs Road, and Green Valley Road further north; to the south by rural residences and forested land on Western Sierra Way, East Green Springs Road, and Clarksville Road; to the east by rural residences and forested land surrounding Clarksville Road, Marden Drive, and Green Valley Road further east; and to the west by a sub-divided residential development (Figure 2).

No evidence of RECs was observed at the adjoining properties.

# 4 Historical Records Review

A variety of sources were reviewed to develop the history of the subject property and adjacent properties to assess for environmental concerns. These resources included the following:

- Aerial photographs provided by EDR for years 1940, 1952, 1962, 1966, 1972, 1984, 1993, 2006, 2009, 2012, 2016, and 2020;
- City directories for the subject property and adjoining properties provided by EDR for the years between 1971 and 2020, in approximately 5-year increments;
- Topographic maps provided by EDR of Clarksville, Folsom, and Sacramento quadrangles dated 1891, 1892, 1893, 1941, 1944, 1953, 1973, 1980, 2012, 2015, 2018, and 2021; and
- Tax parcel information provided by the El Dorado County Assessor's Office.

Historically and environmentally significant findings from reviewed documents are summarized below. Copies of historical aerial photographs, city directories, and topographic maps from EDR are provided in Appendices C, D, and E, respectively. Although requested by Terraphase, no Sanborn® maps were available for the subject property. EDR's certification indicating no coverage is provided in Appendix F.

## 4.1 Aerial Photographs

Observations regarding the subject property, adjoining-properties, and surrounding area from aerial photographs are summarized below.

### 4.1.1 Subject Property

In the 1940 aerial photograph, the subject property consists of primarily undeveloped range and forest land. Unimproved roadways are shown throughout the subject property. Two sets of structures are observed towards the north and northeast indicative of residences or a combination of residential and ancillary storage structures. Present-day Green Valley Road is the northeastern subject property boundary.

No significant changes to the subject property are identified in the 1952 aerial photograph, except for two reservoirs observed in the northern portion adjacent to present-day Green Valley Road.

No significant changes to the subject property are identified in the 1962 and 1966 aerial photographs.

A small structure on the northern portion of the subject property in the apparent position of the residence at 3200 Verde Valle Lane is identified in the 1972 aerial photograph.

No significant changes to the subject property are identified in the 1984 aerial photograph.

The 1993 aerial photograph provides better visibility of unimproved roadways throughout the central portion of the subject property. No additional structures or features, besides those previously observed, are identified.

Row crops are depicted on the northern corner of the subject property in the 2006 aerial photograph.

No significant changes to the subject property are identified in the 2009 through 2020 aerial photographs.

### 4.1.2 Adjoining Properties and Surrounding Area

A summary of development on adjoining properties is provided in the following subsections.

#### 4.1.2.1 North-Adjoining Properties

In the 1940 aerial photograph, the north-adjoining properties are generally undeveloped forest and grazing land. Green Valley Road is shown immediately north of the subject property boundary. No structures or other features are depicted.

The 1952 aerial photograph shows a significant decrease to the forested areas in the north- and northwestern-adjoining properties compared to 1940.

Present-day Green Valley Road is clearly depicted on the north and northwestern adjoining properties in the 1962 aerial photograph, moving in the east–west direction. Several structures are observed in the vicinity of the road. No changes to the forested areas are observed. The northeast-adjoining property remains unchanged.

No significant changes to the north-adjoining properties and vicinity are identified in the 1966 and 1972 aerial photographs.

The beginnings of residential development in the north-adjoining properties (between the subject property and present-day Green Valley Road) are observed in the 1984 aerial photograph.

Residential structures are observed north of the subject property along present-day West Green Springs Road and Verde Valle Lane in the 1993 aerial photograph. Further residential development is observed north of Green Valley Road.

No significant changes to the north-adjoining properties and vicinity are observed in the 2006 aerial photograph.

No significant changes to the north-adjoining properties and vicinity are depicted in the 2009 through 2020 aerial photographs; the surrounding area remains consistent with residential development use.

#### 4.1.2.2 East-Adjoining Properties

In the 1940 aerial photograph, the east-adjoining properties are generally undeveloped forest and grazing land. Green Valley Road is shown towards the east of the subject property. No structures or other features are depicted.

No significant changes to the east-adjoining properties are depicted in the 1952 aerial photograph.

The 1962 aerial photograph shows a decrease in the forested areas directly east of the subject property. A utility easement is observed in the southeast-adjoining property towards the west. A roadway is observed towards the northeast of the subject property.

The 1966 aerial photograph depicts decreased forested areas to the northeast, east, and southeast of the subject property.

Portions of the east-adjoining properties in the 1972 aerial photograph are unreadable; the surrounding areas remain unchanged from previous years.

The beginnings of residential development in the east-adjoining properties are observed in the 1984 aerial photograph.

In the 1993 aerial photograph, the east-adjoining properties consist of forested land and residential structures. The surrounding area appears consistent with residential development.

No significant changes to the east-adjoining properties and vicinity are observed in the 2006 through 2020 aerial photographs. The surrounding area remains consistent with forest land use and residential development.

#### 4.1.2.3 South-Adjoining Properties

In the 1940 aerial photograph, the south-adjoining properties are generally undeveloped forestland. No structures or other features are depicted.

The 1952 aerial photograph shows a significant decrease to the forested area in the southwestern adjoining property compared to 1940. The south and southeastern adjoining properties remain the same.

A utility easement in the east–west direction is shown on the south-adjoining properties in the 1962 aerial photograph. No change in the forested areas towards the south is observed.

The 1966 aerial photograph depicts decreased forested areas in the south-adjoining properties.

No significant changes to the south-adjoining properties are observed in the 1972 aerial photograph.

Several roadways in the south-adjoining properties are depicted in the 1984 aerial photograph.

In the 1993 aerial photograph, the south-adjoining properties consist of forested land and residential structures. The surrounding area appears consistent with residential development.

No significant changes to the south-adjoining properties and vicinity are observed in the 2006 through 2012 aerial photographs.

The 2016 aerial photograph depicts be beginning of residential development construction on the southwest-adjoining property.

The 2020 aerial photograph shows residential structures and roadways identified on the southwest-adjoining property, consistent with general residential development in the area.

#### 4.1.2.4 West-Adjoining Properties

In the 1940 aerial photograph, the west-adjoining properties are generally undeveloped forestland. No structures or other features are depicted.

The 1952 aerial photograph shows a significant decrease to the forested areas in the western-adjoining properties compared to 1940.

No significant changes to the west-adjoining properties and vicinity are shown in the 1962 through 1993 aerial photographs.

The 2006 aerial photograph depicts the west-adjoining properties consisting of extensive residential development compared to the 1993 photograph. Residential structures are observed surrounding the area in addition to forested land.

No significant changes to the west-adjoining properties and vicinity are depicted in the 2009 through 2020 aerial photographs; the surrounding area remains consistent with residential use.

## 4.2 City Directories

Observations regarding the subject property, adjoining-properties, and surrounding area from city directories are summarized below.

### 4.2.1 Subject Property

The subject property was identified in the city directories as follows:

- **3200 Verde Valle Lane**
  - 2005 – 2010, 2017: Kimberly S. Dixon
  - 2014: Robert N. Pena
  - 2020: Amanda Pena, Kimberly Dixon
- **1856 Green Valley Road**
  - 2014: Unknown occupant

### 4.2.2 Adjoining Properties and Surrounding Area

Adjacent addresses to the subject property include:

- **Northern adjoining properties:**
  - 3125 Verde Valle Lane: Rogers, L (1992, 1995, 2000), Teta Electronics, Kazem Endadi (2005, 2010), Unknown occupant (2014), Lynda McQuillan (2017, 2020)
  - 3150 Verde Valle Lane: Unknown occupant (2000), Tami Teshima (2005, 2010), Brian Black (2014, 2017), Dirk Himley, Tami Teshima Realtor Inc. (2020)
  - 3163 Verde Valle Lane: Nick Jensen (1995, 2000, 2005, 2010, 2014, 2017)
  - 1740 Green Valley Road: A Childs Preschool (1992, 1995), Colleen O'Brien (2000, 2010), Mike K Ramos (2005, 2014), Melody Moore, Nicole Paine (2020)
  - 1768 Green Valley Road: Lee Vanderburg (1992, 1995, 2000, 2005, 2014, 2017), Macon Vanderburg (2010), Jodie Vanderburg, Marian Vanderburg (2020)
  - 2040 West Green Springs Road: Residential (2005, 2010, 2014, 2017, 2020)

  - 2070 West Green Springs Road: Residential (2005, 2010, 2014, 2017, 2020), Urban 44 Management (2010)

- **Western adjoining properties:**
  - 2810 – 2924 Aberdeen Lane: Residential (2005, 2010, 2014, 2017, 2020)
- **Southern adjoining properties:**
  - 2175 East Green Springs Road: Residential (2005, 2017)
- **Eastern adjoining properties:**
  - 2021 Marden Drive: Residential (2005, 2010, 2014, 2017, 2020)
  - 2030 Marden Drive: QCSI (2005), Residential (1990, 1992, 1995, 2000, 2005, 2010, 2014, 2017, 2020),
  - 2039 Marden Drive: Residential (2005, 2010, 2014, 2017)

The above-listed city directory observations are not an environmental concern.

## 4.3 USGS Topographic Maps

Observations regarding the subject property, adjoining-properties, and surrounding area from topographic maps are summarized below.

### 4.3.1 Subject Property

The 1891 through 1893 topographic maps do not provide details of the subject property. Green Spring Creek runs through the eastern portion of the subject property. No site-specific details or buildings on the subject property are provided.

Green Spring Creek, an intermittent stream, goes through the northern end of the subject property on the 1941 topographic map. An unimproved dirt road is observed to the north of the subject property, with two structures observed in the vicinity of the road.

No significant changes to the subject property are observed on the 1944 topographic map.

Present-day Green Valley Road is the northeastern subject property boundary on the 1953 topographic map. The same features are identified on the subject property; the residence on the northern portion may have been partially in ruins. Two additional water bodies are present on the northern end of the subject property, directly south of Green Valley Road.

No significant changes to the subject property are observed on the 1973 topographic map.

The 1980 topographic map shows the unimproved roadway continuing south through the entire subject property. An additional structure is identified towards the north of the subject property.

The 2012 topographic map is shaded white due to increased urban development. The previously identified unimproved roadway on the northern end of the subject property is labeled Jason Lane.

No significant changes to the subject property are observed on the 2015, 2018, or 2021 topographic maps.

### 4.3.2 Adjoining Properties and Surrounding Area

The 1891 through 1893 topographic maps do not provide details of the adjacent properties. Surrounding streets are shown but no site-specific details or buildings on the subject property or adjacent properties are provided. Green Spring Creek runs through the subject property and to the east and west.

Martel Creek, an intermittent stream, is shown to the northeast of the subject property, along with several unimproved roadways. Live Oak School is shown to the northwest of the subject property along present-day Green Valley Road.

No significant changes to the adjoining properties or surrounding areas are shown on the 1944 topographic map.

Deer Valley Road is depicted to the east of the subject property on the 1953 topographic map; a cemetery is shown further east along with a reservoir. Structures are shown along either side of the road. The Live Oak School to the northwest of the subject property is abandoned; a reservoir is also observed in the vicinity of Live Oak School.

The 1980 topographic map shows new roads and structures indicating further residential development observed to the north, northwest, and east of the subject property.

The 2012 through 2021 topographic maps show residential development in the vicinity of the subject property.

## 4.4 Property Tax Files

Based on tax information available on the El Dorado County Assessor website, the 280-acre subject property consists of five parcels identified as APNs 126-020-001, 126-020-002, 126-020-003, 126-020-004, and 126-150-023. The subject property is zoned for residential use.

## 4.5 Local Building Department Records

Building records are managed by El Dorado County Building Services Department. Records were found for the residence at 3200 Verde Valle Lane, further described in Section 5.2.1; no records of environmental concern were identified upon review.

## 4.6 Prior Reports

Terraphase reviewed the report *Phase I Environmental Site Assessment, Dixon Ranch, Green Valley Road, El Dorado Hills, California 95762* (Youngdahl Consulting Group, Inc. 2011) provided in Appendix G. The 2011 Phase I ESA included three of the five subject property parcels (APNs 126-150-23, 126-020-02, and 126-020-03). Land use for the parcels included agricultural (strawberry fields), horse and cattle grazing, and an agricultural dump site. Three empty aboveground fuel storage tanks were observed on

one of the agricultural parcels. The report recommended that the tanks be cleaned and removed from the property. Terraphase did not observe the previously identified fuel tanks on APN 126-150-023 during the 2024 site reconnaissance. Based on the age of the older on-site structures, screening for lead-based paint and asbestos-containing material prior to residential development was recommended. No RECs were identified for the subject property.

## 4.7 Summary

Based on a review of historical documents, the subject property was initially developed with two residential structures in 1940, with the remaining land undeveloped. Agriculture (row crops) was first observed in the northern portion of the subject property in 2006. The subject property is currently mixed use, comprised of rural residential, grazing, and forested land.

Based on review of historical documents, adjoining properties have remained generally undeveloped since at least 1940; residential development began in the northern and eastern-adjoining properties around 1984, in the southern-adjoining property around 2016, and in the western-adjoining properties around 2006.

# 5 Regulatory Records Review

Terraphase reviewed applicable and reasonably ascertainable federal, state, and local environmental-related databases as part of this Phase I ESA, discussed below.

## 5.1 Standard Environmental Record Sources

EDR provided the regulatory agency database report discussed in this section. Terraphase reviewed the EDR report for information regarding reported releases of hazardous substances and petroleum products on or near the property. Specific records and search distances (measured from the approximate property boundary of the subject property) for the environmental databases were reported by EDR to be consistent with ASTM E1527-21 and are discussed in the EDR report dated April 15, 2024, provided as Appendix C.

These sources of information, as well as interviews conducted, historical sources, and subject property observations, were found to be sufficient in evaluating the existence of RECs, historical RECs, CRECs, and/or de minimis conditions as part of this Phase I ESA. Therefore, an in-person review of the county or state records by Terraphase was found to be unwarranted (as defined in ASTM E1527-21, Section 8.2.3).

### 5.1.1 Subject Property Listings

Addresses associated with the subject property were not listed in the EDR Report.

### 5.1.2 Adjoining and Surrounding Property Listings

The following adjoining properties were listed in the EDR report:

- **Dormody, no address listed, 0.23 miles east of the subject property.** This property was listed in the Mines MRDS (Mineral Resources Data System) database for gold ore deposits reported in 1983 by the United States Bureau of Mines. Based on the administrative nature of the discovery, and lack of documentation of a release at the subject property, the listing is not considered a REC.
- **Sanford Ranch, 2321 Green Valley Road, 0.69 miles east of the subject property.** This property was listed on the California Department of Toxic Substances Control's Envirostor database for potential PCB impacts to the subsurface. A complaint was filed in June 1984 by the property owner reporting high numbers of livestock cancers and deaths. A transformer located on the property was struck by lightning several years prior and the liquid contents (potentially containing PCBs) scattered throughout the grazing and barn areas. Soil samples were taken by the California Department of Health Services' Resource for Cancer Epidemiology but the date of sampling was unknown and the results were not located (California Department of Health Services 1987). Pacific Gas & Electric reported that the transformer was replaced in June 1984. Liquid samples had been collected and analyzed for PCBs but the results were unavailable.

  The *Limited Preliminary Assessment Summary* issued by the California Department of Health Services in November 1987 recommended a pending status based on further investigation on the contents of the transformer and status of the analytical results. A handwritten notation was

identified on the document stating "Changed to NFA" but "No Further Action" (NFA) documents were not found. Impacts to groundwater were not mentioned or discussed in the 1987 preliminary assessment. Based on the distance from the subject property, the listing is not considered an environmental concern.

### 5.1.3 Additional Listings

Terraphase reviewed the following databases for relevant records related to the subject property and adjoining properties:

- Online state cleanup databases, including Envirostor and Geotracker.
- Hazardous Waste Tracking System.
- National Pipeline Mapping System Public Viewer website.[6]
- United States Coast Guard National Response Center online databases.
- USEPA Envirofacts website.[7]

The only listings identified during Terraphase's database review were included in the EDR report, as discussed above.

### 5.1.4 Orphan Listings

Terraphase also reviewed the "unmappable" (also referred to as "orphan") listings within the EDR report, cross-referencing available address information and facility names. Unmappable properties are listings that could not be plotted with confidence but are potentially in the general area of the subject property based on the partial street address, city, or zip code. EDR identified no orphan listings.

## 5.2 Additional Environmental Record Sources

In addition to EDR report review, Terraphase contacted additional environmental record sources, as described in the following subsections.

### 5.2.1 Local Regulatory Records

Applicable municipal records reviewed in preparation of this Phase I ESA report are discussed below.

#### 5.2.1.1 El Dorado Hills Fire Department

On April 15, 2024, Terraphase submitted a request to the El Dorado Hills Fire Department for relevant records regarding any fires, complaints, permits, and violations involving hazardous waste or materials; UST/AST installation, abandonment, or removal; hazardous waste generation and handling records; hazardous releases; and remediation programs for the subject property. On April 30, 2024, a response

[6] https://pvnpms.phmsa.dot.gov/PublicViewer/

[7] https://enviro.epa.gov/

was received noting inspection records were found for the residence at 3200 Verde Valle Lane. No release was reported and the records do not constitute a REC.

### 5.2.2 County Regulatory Records

Applicable El Dorado County records reviewed in preparation of this Phase I ESA report are discussed below.

#### 5.2.2.1 El Dorado County Fire Department

On April 22, 2024, Terraphase contacted the El Dorado County Fire Department to request relevant records related to the installation or removal of on-site USTs and/or ASTs. The El Dorado County Fire Department does not have jurisdiction in the city of El Dorado Hills; therefore, no records exist.

#### 5.2.2.2 El Dorado County Department of Environmental Management

On April 15, 2024, Terraphase submitted a public records request to the El Dorado County Department of Environmental Management to request relevant records regarding any fires, complaints, permits, and violations involving hazardous waste or materials; UST/AST installation, abandonment, or removal; hazardous waste generation and handling records; hazardous releases; and remediation programs for the subject property. On April 19, 2024, a response was received noting no records were found.

#### 5.2.2.3 El Dorado County Air Quality Management District

On April 15, 2024, Terraphase submitted a public records request to the El Dorado County Air Quality Management District to request relevant records regarding any air permits, air permit applications, or violations for the subject property. On April 15, 2024, a response was received noting no records were found.

#### 5.2.2.4 El Dorado County Planning and Building Services Departments

On April 15, 2024, Terraphase submitted a public records request to the El Dorado County Planning and Building Services Departments to request relevant records regarding any fires, complaints, permits, and violations involving hazardous waste or materials; UST/AST installation, abandonment, or removal; hazardous waste generation and handling records; hazardous releases; and remediation programs for the subject property. On April 25, 2024, a response was received with current plans and revisions for the proposed residential development.

#### 5.2.2.5 El Dorado County Planning and Stormwater Division

On April 15, 2024, Terraphase submitted a public records request to the El Dorado County Planning and Stormwater Division to request relevant records regarding any fires, complaints, permits, and violations involving hazardous waste or materials; UST/AST installation, abandonment, or removal; hazardous waste generation and handling records; hazardous releases; and remediation programs for the subject property. The following records were received for the 3200 Verde Valle Lane portion of the subject property identified as APN 126-020-001:

- 1977–1978: El Dorado County Building Services Department construction permit to add electric to existing storage
- 1989: El Dorado County Community Development Department Building Division Permit to convert an agricultural barn to residential dwelling
- July 1999: El Dorado County Building Services Department well permit (200-foot well)
- 2005: El Dorado County Building Services Department permit and inspection form for residence
- 2023: Permit to mount residential solar panels

No issues of environmental concern were identified in the available records.

### 5.2.3 State Regulatory Records

Terraphase accessed state regulatory records via Geotracker and Envirostor, as discussed in Section 5.1.3.

# 6 Interviews

Owner and regulatory agency interviews conducted by Terraphase are presented in this section.

## 6.1 Interview with Current Owner, Operator, and Occupant Representatives

During the subject property reconnaissance visit on April 18, 2024, Terraphase conducted interviews with the key site manager (as defined in the ASTM E1527-21, Section 10.5.1), Derek Spalding, who has been associated with the subject property since 2009.

Additional information provided by facility personnel during the Site reconnaissance is discussed in Section 3.3. Additional information otherwise provided by Mr. Spalding during the reconnaissance is discussed in applicable sections of this report.

## 6.2 Interview with Former Owner, Operator, and Occupant Representative

Former owners, operator, and occupant were not contacted/interviewed as part of this Phase I ESA.

## 6.3 Interviews with Regulatory Agency Representatives

Terraphase contacted local, county, and state agencies via telephone, electronic mail, letter, or in person or accessed available records online to inquire as to whether they possessed relevant records regarding the subject property, as discussed in Section 5.2.

# 7 Non-Scope Considerations

Terraphase reviewed available information regarding the following non-scope considerations.

ASTM E2600-22 was used as guidance for conducting vapor encroachment screening for the subject property.[8] The purpose of the screening was to assess whether a vapor encroachment condition exists from contaminants of concern that may migrate as vapors onto a property as a result of contaminated soil and groundwater on or near the subject property.

In accordance with ASTM E2600-22 (Tier 1), potential petroleum hydrocarbon sources (e.g., active Leaking Underground Storage Tank [LUST] cases) were evaluated for vapor intrusion within 1/10 mile of the subject property and volatile organic compound sources (active Spills Leaks and Investigation Cleanup [SLIC] cases) within 1/3 mile of the subject property. No potential petroleum hydrocarbon or volatile organic compound sources were identified within applicable distances.

[8] Terraphase notes that vapor encroachment screening in accordance with the ASTM E2600 standard is considered a non-scope consideration in ASTM E1527-21.

# 8 Findings, Opinions, and Conclusions

This assessment revealed the following findings, opinions, and conclusions.

## 8.1 Findings and Opinions

Terraphase performed the Phase I ESA in conformance with the scope and limitations of ASTM E1527-21 of the Generations Residential Development property at 3200 Verde Valle Lane, 1856 Green Valley Road, and other unreported addresses, in El Dorado Hills, California (the subject property). Any exceptions to, or deletions from, this practice are described in Section 1 of this report.

Upon review of user-provided information, review of historical and regulatory records, performing the site reconnaissance, and conducting interviews, Terraphase identified the following findings as having the potential to be RECs, CRECs, historical RECs, de minimis conditions, or as otherwise noteworthy. Additionally, our data gap analysis is provided below.

### 8.1.1 RECs

Terraphase identified no RECs during this Phase I ESA.

Terraphase identified no CRECs during this Phase I ESA.

### 8.1.2 Historical RECs

Terraphase identified no historical RECs during this Phase I ESA.

### 8.1.3 De Minimis Conditions

Terraphase identified no de minimis condition(s) during this Phase I ESA.

### 8.1.4 Other Findings

The following findings of note were identified upon performance of this Phase I ESA; however, they were not considered to be a REC, CREC, historical REC, de minimis condition, or significant data gap:

- **Finding 1: Historical use of agricultural chemicals.** The northeastern portion of the subject property has been developed for agricultural use since at least 2006, including the historical operation of row crops. Based on the recent agricultural operation in this area, the likely use of agricultural chemicals (e.g., pesticides, herbicides, fertilizers) potentially accumulating in soils and impacting the subsurface is low, therefore this is considered a finding of note.

### 8.1.5 Data Gap Analysis

A data gap is a lack or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information.

Terraphase identified the following significant data gap (i.e., data gaps that affect the ability of Terraphase to identify RECs):

- A pit partially filled with water and debris was observed on APN 126-150-023 (1856 Green Valley Road) in the vicinity of the vacant residence. A discarded appliance and various piping were observed within the pit. No staining, odors, or sheens were observed. Based on historical usage of pits as disposal areas, and the unknown contents of this location, the unknown pit is considered a significant data gap.

In accordance with ASTM E1527-21, Section 12.8, in the opinion of the environmental professional, additional investigation (i.e., further exposing the contents of the pit) would likely address the significant data gap and assist the environmental professional in determining whether a REC or CREC exists. Note this opinion does not constitute a recommendation or requirement for further investigation.

Terraphase identified the following data gaps; however, they are not considered to be significant data gaps and do not alter the conclusions of the report:

- Under ASTM E1527-21, Section 8.3.2, "all obvious uses of the property shall be identified from the present, back to the property's first developed use, or back to 1940, whichever is earlier." The earliest detailed historical source identified by Terraphase was an aerial photograph dated 1940, which depicted the subject property as mostly undeveloped range and forest land with a few residential structures. Documentation prior to this development was not uncovered during this Phase I ESA. Based on the reviewed sources of historical information, this data gap is not considered to be significant (i.e., does not affect the ability of Terraphase to identify RECs).
- Former owners and occupants were not contacted as contact information was not provided. Based on the reviewed sources of historical information, this data gap is not considered to be significant.
- The interior of the occupied residence was not accessed during the site reconnaissance and the subject property contact was unaware of the utility providers for the residence. The occupant was contacted but no response was received. Based on reviewed sources of historical information, and review of the future development plans, this data gap is not considered to be significant.
- Under ASTM E1527-21, Section 8.3.8., standard historical resources including fire insurance maps shall be reviewed. Although requested by Terraphase, no Sanborn® maps were available for the subject property. Based on the reviewed sources of historical information, this data gap is not considered to be significant (i.e., does not affect the ability of Terraphase to identify RECs).

Terraphase identified no additional data gaps during this Phase I ESA.

## 8.2 Conclusions

The Phase I ESA of the subject property was performed in conformance with the scope and limitations of ASTM E1527-21. Any exceptions to, or deletions from, this practice are described in Section 1 of this report.

This assessment revealed the conclusions provided in the following subsections.

### 8.2.1 RECs

Terraphase identified no RECs during this Phase I ESA.

Terraphase identified no controlled RECs during this Phase I ESA.

### 8.2.2 Significant Data Gaps

Terraphase identified the following significant data gap:

- A pit partially filled with water and debris was observed on the subject property. Based on historical usage of pits as disposal areas, and the unknown contents of this location, the unknown pit is considered a significant data gap.

# 9 Qualifications of Staff

Travis Zandi is an Associate Scientist with Terraphase with more than 11 years of experience in environmental due diligence assessments including coordinating and performing more than 400 Phase I ESAs per ASTM E1527. Assessed sites include marinas, former lumber mills, residential properties, warehouses and distribution centers, and various commercial properties including dry cleaners, retail gasoline service stations, and automotive repair facilities. Mr. Zandi holds a Master of Arts degree in History from Western Washington University.

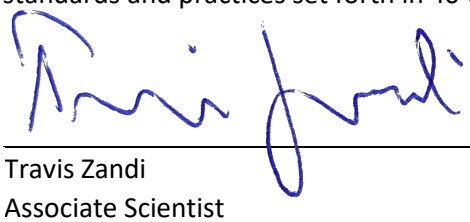
Mr. Zandi meets the requirements of an "Environmental Professional," as described in USEPA's AAI rule.

# 10 Statement of Environmental Professional

This report is intended to meet the requirements of ASTM E1527-21, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* and has been prepared by the undersigned Terraphase environmental professional.

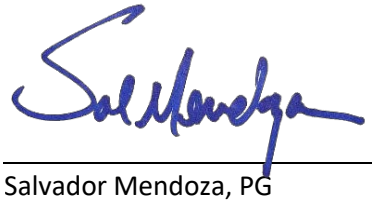
The assessment consisted solely of the activities described in the Introduction of this report and was performed in accordance with ASTM E1527-21 guidelines, as applicable, for Phase I ESAs and the terms and conditions of the Standard Consulting Services Agreement signed prior to initiation of the assessment, as applicable. The assessment was conducted in a manner consistent with the level of care and skill ordinarily exercised by professional engineers, professional geologists, and environmental scientists.

"I declare that, to the best of my professional knowledge and belief, I meet the definition of environmental professional as defined in § 312.10 of 40 CFR 312,[9] and I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the property. I have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR 312."



Travis Zandi
Associate Scientist

May 9, 2024
Date



Salvador Mendoza, PG
Associate Geologist

May 9, 2024
Date

[9] Definitions, 40 CFR § 312.10 (2022), https://www.ecfr.gov/current/title-40/chapter-I/subchapter-J/part-312/subpart-B/section-312.10

# 11 References

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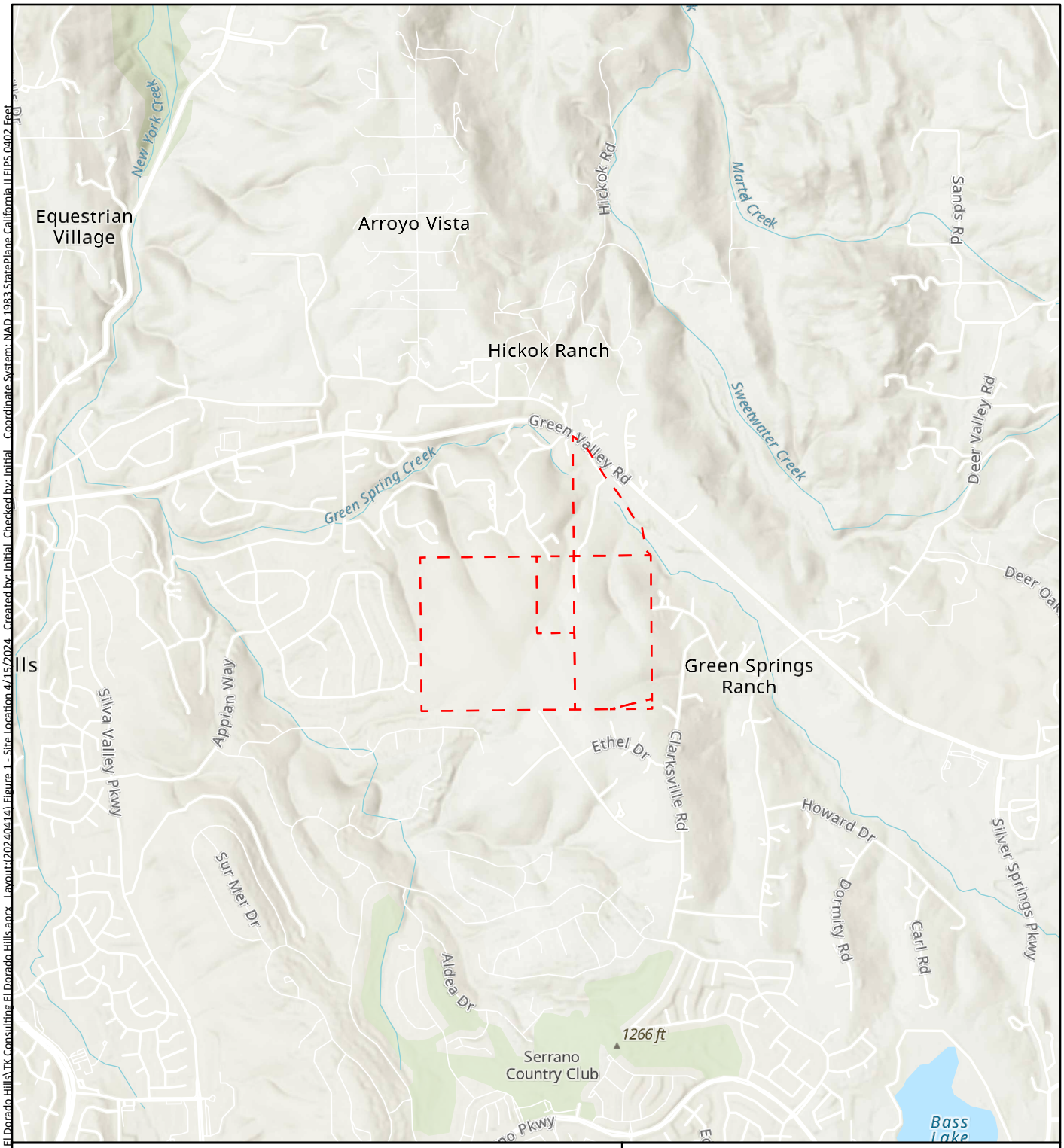
# Figures

1 Site Location

2 Site Layout and Vicinity




SAFETY FIRST

terraphase engineering

CLIENT: TK Consulting, Inc

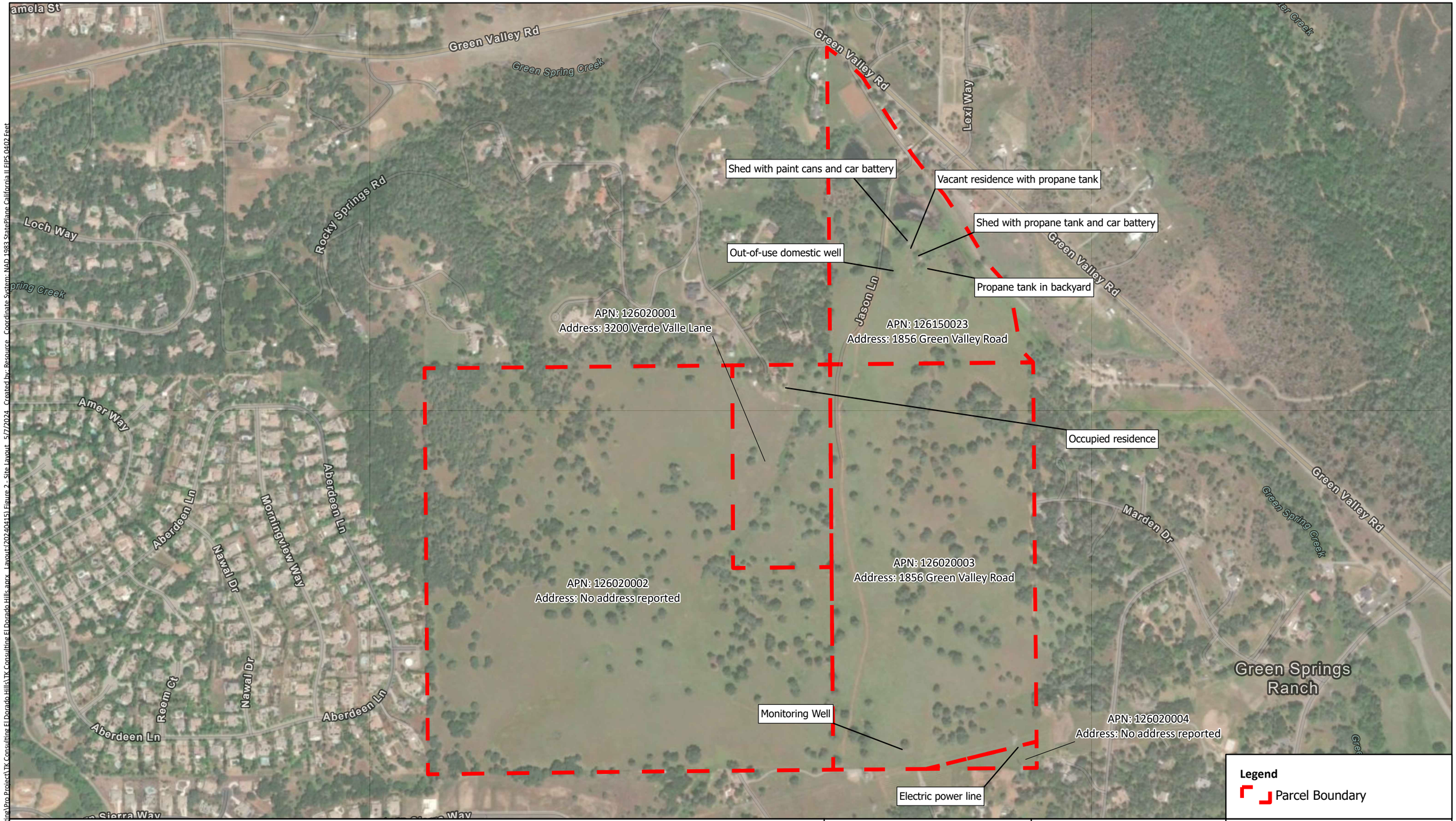
PROJECT: El Dorado Hills Phase I ESA

PROJECT NUMBER: C077.001.001

**Site Location**

**FIGURE 1**

File: N:\GIS\Pri\C077 TK Consulting\Pro Project\TK Consulting El Dorado Hills\TK Consulting El Dorado Hills.aprx Layout:(20240414) Figure 1 - Site Location 4/15/2024 Created by: Initial Checked by: Initial Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet




Aerial imagery source: ESRI World Imagery

0 600 1,200 Feet

1 inch = 600 feet

N

SAFETY FIRST

terraphase engineering

| | |
|---|---|
| CLIENT: | TK Consulting, Inc |
| PROJECT: | El Dorado Hills Phase I ESA |
| PROJECT NUMBER: | C077.001.001 |

**Site Layout**

**FIGURE 2**

File: N:\GIS\Prj\C077 TK Consulting\Pro Project\TK Consulting El Dorado Hills\TK Consulting El Dorado Hills.aprx Layout: Layout1(20240415) Figure 2 - Site Layout 5/7/2024 Created by: Resource Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet

# Appendix A

## Photograph Log



**Photograph 1:**

View of Green Springs Creek that runs through the northeastern portion of 1856 Green Valley Road (APN 126-150-023). Photo facing northeast.

Date: April 18, 2024



**Photograph 2:**

View of the pond located at the northwestern portion of 1856 Green Valley Road (APN 126-150-023). Photo facing northwest.

Date: April 18, 2024

terraphase engineering

**Client:** Green Valley Road Benefits, LLC

**Project:** Phase I ESA – 3200 Verde Valle Lane, 1856 Green Valley Road, and Other Unreported Addresses

**Project Number:** C077.001.001

# Photo Log



**Photograph 3:**

View of the pond located at the northeastern portion of 1856 Green Valley Road (APN 126-150-023). Photo facing northeast.

Date: April 18, 2024



**Photograph 4:**

View of first shed with corroded exterior containing rusted paint cans and a car battery, located in the central portion of 1856 Green Valley Road (APN 126-150-023). Photo facing northwest.

Date: April 18, 2024



**Photograph 5:**

View of first shed's interior containing rusted paint cans and a car battery. Photo facing northwest.

Date: April 18, 2024



**Photograph 6:**

View of second shed exterior containing miscellaneous waste, an empty propane tank, and a car battery. Shed located in central portion of 1856 Green Valley Road (APN 126-150-023). Photo facing east.

Date: April 18, 2024



**Photograph 7:**

View of second shed interior containing miscellaneous waste, an empty propane tank, and a car battery. Photo facing south.

Date: April 18, 2024



**Photograph 8:**

View of miscellaneous waste and an empty propane tank in yard behind the vacant residence of 1856 Green Valley Road (APN 126-150-023). Photo facing northeast.

Date: April 18, 2024



**Photograph 9:**

View of northern exterior of the vacant residence at 1856 Green Valley Road (APN 126-150-023). Photo facing south.

Date: April 18, 2024



**Photograph 10:**

View of the electric meter box at the vacant residence. Photo facing northwest.

Date: April 18, 2024



**Photograph 11:**

View of the distribution transformer attached to the power line in front of vacant residence at 1856 Green Valley Road (APN 126-150-023) Photo facing northeast.

Date: April 18, 2024



**Photograph 12:**

View of the southern exterior of the vacant residence at 1856 Green Valley Road (APN 126-150-023). Photo facing north.

Date: April 18, 2024



**Photograph 13:**

View of the vacant residence interior and an empty propane tank inside. Photo facing north.

Date: April 18, 2024



**Photograph 14:**

View of a pit partially filled with water behind the vacant residence. Photo facing northwest.

Date: April 18, 2024



**Photograph 15:**

Additional view of a pit partially filled with water behind the vacant residence. Photo facing northwest.

Date: April 18, 2024



**Photograph 16:**

View of out-of-use electric powered domestic well behind the vacant residence at 1856 Green Valley Road (APN 126-150-023). Photo facing southeast.

Date: April 18, 2024



**Photograph 17:**

View of property line between 1856 Green Valley Road (APN 126-150-023) and 3200 Verde Valle Lane (APN 126-020-001). Photo facing west.

Date: April 18, 2024



**Photograph 18:**

View of property line between APN 126-020-003, 1856 Green Valley Road (APN 126-150-023), and the vineyard at the southern adjoining property. Photo facing south.

Date: April 18, 2024



**Photograph 19:**

View of the monitoring well located at the southern end of APN 126-020-003.

Date: April 18, 2024



**Photograph 20:**

View of the electrical power line at the southeastern end of APN 126-020-003. Photo facing east.

Date: April 18, 2024



**Photograph 21:**

View of the property line between APN 126-020-004 and the vineyard at the eastern adjoining property. Photo facing northeast.

Date: April 18, 2024



**Photograph 22:**

View of APN 126-020-004. Photo facing north.

Date: April 18, 2024



**Photograph 23:**

View of the property line between APN 126-020-002 and the residence at the southern adjoining property. Photo facing northeast.

Date: April 18, 2024



**Photograph 24:**

View of Folsom Lake from APN 126-020-002. Photo facing west.

Date: April 18, 2024



**Photograph 25:**

View of the exterior of the occupied residence at 3200 Verde Valle Lane (APN 126-020-001). Photo facing northwest.

Date: April 18, 2024

# Appendix B

## Regulatory Record and Physical Setting Report

**3200 VERDE VALLE LN**
3200 VERDE VALLE LN
EL DORADO HILLS, CA 95762

Inquiry Number: 7624776.2s
April 15, 2024

# The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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| Government Records Searched/Data Currency Tracking | GR-1 |

**GEOCHECK ADDENDUM**

| | |
|---|---|
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| Physical Setting Source Summary | A-2 |
| Physical Setting SSURGO Soil Map | A-5 |
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***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.


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# EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527 - 21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E2247 - 16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E1528 - 22) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

## TARGET PROPERTY INFORMATION

### ADDRESS

3200 VERDE VALLE LN
EL DORADO HILLS, CA 95762

### COORDINATES

| | |
|---|---|
| Latitude (North): | 38.7055130 - 38° 42' 19.84'' |
| Longitude (West): | 121.0463320 - 121° 2' 46.79'' |
| Universal Tranverse Mercator: | Zone 10 |
| UTM X (Meters): | 669882.1 |
| UTM Y (Meters): | 4285702.0 |
| Elevation: | 1102 ft. above sea level |

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

| | |
|---|---|
| Target Property Map: | 50005916 CLARKSVILLE, CA |
| Version Date: | 2021 |

### AERIAL PHOTOGRAPHY IN THIS REPORT

| | |
|---|---|
| Portions of Photo from: | 20200617 |
| Source: | USDA |

## MAPPED SITES SUMMARY

Target Property Address:
3200 VERDE VALLE LN
EL DORADO HILLS, CA 95762

Click on Map ID to see full detail.

| MAP ID | SITE NAME | ADDRESS | DATABASE ACRONYMS | RELATIVE ELEVATION | DIST (ft. & mi.) DIRECTION |
|---|---|---|---|---|---|
| 1 | DORMODY | | MINES MRDS | Lower | 1198, 0.227, East |
| 2 | SANFORD RANCH | 2321 GREENVALLEY ROA | ENVIROSTOR | Higher | 3637, 0.689, ESE |

# EXECUTIVE SUMMARY

## TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

## DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

## STANDARD ENVIRONMENTAL RECORDS

### *Lists of Federal NPL (Superfund) sites*

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

### *Lists of Federal Delisted NPL sites*

Delisted NPL ---------- National Priority List Deletions

### *Lists of Federal sites subject to CERCLA removals and CERCLA orders*

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

### *Lists of Federal CERCLA sites with NFRAP*

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

### *Lists of Federal RCRA facilities undergoing Corrective Action*

CORRACTS ---------- Corrective Action Report

### *Lists of Federal RCRA TSD facilities*

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

### *Lists of Federal RCRA generators*

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

### *Federal institutional controls / engineering controls registries*

LUCIS ---------- Land Use Control Information System

US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROLS ..... Institutional Controls Sites List

***Federal ERNS list***

ERNS ..... Emergency Response Notification System

***Lists of state- and tribal (Superfund) equivalent sites***

RESPONSE ..... State Response Sites

***Lists of state and tribal landfills and solid waste disposal facilities***

SWF/LF ..... Solid Waste Information System

***Lists of state and tribal leaking storage tanks***

LUST ..... Geotracker's Leaking Underground Fuel Tank Report
INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land
CPS-SLIC ..... Statewide SLIC Cases

***Lists of state and tribal registered storage tanks***

FEMA UST ..... Underground Storage Tank Listing
UST ..... Active UST Facilities
AST ..... Aboveground Petroleum Storage Tank Facilities
INDIAN UST ..... Underground Storage Tanks on Indian Land

***Lists of state and tribal voluntary cleanup sites***

INDIAN VCP ..... Voluntary Cleanup Priority Listing
VCP ..... Voluntary Cleanup Program Properties

***Lists of state and tribal brownfield sites***

BROWNFIELDS ..... Considered Brownfieds Sites Listing

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Local Brownfield lists***

US BROWNFIELDS ..... A Listing of Brownfields Sites

***Local Lists of Landfill / Solid Waste Disposal Sites***

WMUDS/SWAT ..... Waste Management Unit Database
SWRCY ..... Recycler Database
HAULERS ..... Registered Waste Tire Haulers Listing
INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands
ODI ..... Open Dump Inventory
DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS ..... Open Dumps on Indian Land

***Local Lists of Hazardous waste / Contaminated Sites***

US HIST CDL ..... Delisted National Clandestine Laboratory Register

HIST Cal-Sites ---- Historical Calsites Database
SCH ---- School Property Evaluation Program
CDL ---- Clandestine Drug Labs
Toxic Pits ---- Toxic Pits Cleanup Act Sites
CERS HAZ WASTE ---- California Environmental Reporting System Hazardous Waste
US CDL ---- National Clandestine Laboratory Register

***Local Lists of Registered Storage Tanks***

SWEEPS UST ---- SWEEPS UST Listing
HIST UST ---- Hazardous Substance Storage Container Database
CERS TANKS ---- California Environmental Reporting System (CERS) Tanks
CA FID UST ---- Facility Inventory Database

***Local Land Records***

LIENS ---- Environmental Liens Listing
LIENS 2 ---- CERCLA Lien Information
DEED ---- Deed Restriction Listing

***Records of Emergency Release Reports***

HMIRS ---- Hazardous Materials Information Reporting System
CHMIRS ---- California Hazardous Material Incident Report System
LDS ---- Land Disposal Sites Listing
MCS ---- Military Cleanup Sites Listing
SPILLS 90 ---- SPILLS 90 data from FirstSearch

***Other Ascertainable Records***

RCRA NonGen / NLR ---- RCRA - Non Generators / No Longer Regulated
FUDS ---- Formerly Used Defense Sites
DOD ---- Department of Defense Sites
SCRD DRYCLEANERS ---- State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ---- Financial Assurance Information
EPA WATCH LIST ---- EPA WATCH LIST
2020 COR ACTION ---- 2020 Corrective Action Program List
TSCA ---- Toxic Substances Control Act
TRIS ---- Toxic Chemical Release Inventory System
SSTS ---- Section 7 Tracking Systems
ROD ---- Records Of Decision
RMP ---- Risk Management Plans
RAATS ---- RCRA Administrative Action Tracking System
PRP ---- Potentially Responsible Parties
PADS ---- PCB Activity Database System
ICIS ---- Integrated Compliance Information System
FTTS ---- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ---- Material Licensing Tracking System
COAL ASH DOE ---- Steam-Electric Plant Operation Data
COAL ASH EPA ---- Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER ---- PCB Transformer Registration Database
RADINFO ---- Radiation Information Database
HIST FTTS ---- FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS ---- Incident and Accident Data

# EXECUTIVE SUMMARY

| | |
|---|---|
| CONSENT | Superfund (CERCLA) Consent Decrees |
| INDIAN RESERV | Indian Reservations |
| FUSRAP | Formerly Utilized Sites Remedial Action Program |
| UMTRA | Uranium Mill Tailings Sites |
| LEAD SMELTERS | Lead Smelter Sites |
| US AIRS | Aerometric Information Retrieval System Facility Subsystem |
| US MINES | Mines Master Index File |
| ABANDONED MINES | Abandoned Mines |
| FINDS | Facility Index System/Facility Registry System |
| UXO | Unexploded Ordnance Sites |
| DOCKET HWC | Hazardous Waste Compliance Docket Listing |
| ECHO | Enforcement & Compliance History Information |
| FUELS PROGRAM | EPA Fuels Program Registered Listing |
| PFAS NPL | Superfund Sites with PFAS Detections Information |
| PFAS FEDERAL SITES | Federal Sites PFAS Information |
| PFAS TRIS | List of PFAS Added to the TRI |
| PFAS TSCA | PFAS Manufacture and Imports Information |
| PFAS RCRA MANIFEST | PFAS Transfers Identified In the RCRA Database Listing |
| PFAS ATSDR | PFAS Contamination Site Location Listing |
| PFAS WQP | Ambient Environmental Sampling for PFAS |
| PFAS NPDES | Clean Water Act Discharge Monitoring Information |
| PFAS ECHO | Facilities in Industries that May Be Handling PFAS Listing |
| PFAS ECHO FIRE TRAINING | Facilities in Industries that May Be Handling PFAS Listing |
| PFAS PART 139 AIRPORT | All Certified Part 139 Airports PFAS Information Listing |
| AQUEOUS FOAM NRC | Aqueous Foam Related Incidents Listing |
| BIOSOLIDS | ICIS-NPDES Biosolids Facility Data |
| PFAS | PFAS Contamination Site Location Listing |
| AQUEOUS FOAM | Former Fire Training Facility Assessments Listing |
| CA BOND EXP. PLAN | Bond Expenditure Plan |
| CHROME PLATING | Chrome Plating Facilities Listing |
| Cortese | "Cortese" Hazardous Waste & Substances Sites List |
| CUPA Listings | CUPA Resources List |
| DRYCLEANERS | Cleaner Facilities |
| EMI | Emissions Inventory Data |
| ENF | Enforcement Action Listing |
| Financial Assurance | Financial Assurance Information Listing |
| ICE | Inspection, Compliance and Enforcement |
| HIST CORTESE | Hazardous Waste & Substance Site List |
| HWP | EnviroStor Permitted Facilities Listing |
| HWT | Registered Hazardous Waste Transporter Database |
| HWTS | Hazardous Waste Tracking System |
| HAZNET | Facility and Manifest Data |
| MINES | Mines Site Location Listing |
| MWMP | Medical Waste Management Program Listing |
| NPDES | NPDES Permits Listing |
| PEST LIC | Pesticide Regulation Licenses Listing |
| PROC | Certified Processors Database |
| Notify 65 | Proposition 65 Records |
| HAZMAT | Hazardous Material Facilities |
| UIC | UIC Listing |
| UIC GEO | UIC GEO (GEOTRACKER) |
| WASTEWATER PITS | Oil Wastewater Pits Listing |
| WDS | Waste Discharge System |
| WIP | Well Investigation Program Case List |
| MILITARY PRIV SITES | MILITARY PRIV SITES (GEOTRACKER) |

# EXECUTIVE SUMMARY

PROJECT ---- PROJECT (GEOTRACKER)
WDR ---- Waste Discharge Requirements Listing
CIWQS ---- California Integrated Water Quality System
CERS ---- CERS
NON-CASE INFO ---- NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS ---- OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS ---- PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT ---- SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ ---- Well Stimulation Project (GEOTRACKER)
UST FINDER ---- UST Finder Database
UST FINDER RELEASE ---- UST Finder Releases Database

**EDR HIGH RISK HISTORICAL RECORDS**

***EDR Exclusive Records***

EDR MGP ---- EDR Proprietary Manufactured Gas Plants
EDR Hist Auto ---- EDR Exclusive Historical Auto Stations
EDR Hist Cleaner ---- EDR Exclusive Historical Cleaners

**EDR RECOVERED GOVERNMENT ARCHIVES**

***Exclusive Recovered Govt. Archives***

RGA LF ---- Recovered Government Archive Solid Waste Facilities List
RGA LUST ---- Recovered Government Archive Leaking Underground Storage Tank

**SURROUNDING SITES: SEARCH RESULTS**

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

**STANDARD ENVIRONMENTAL RECORDS**

***Lists of state- and tribal hazardous waste facilities***

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to,

identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 01/22/2024 has revealed that there is 1 ENVIROSTOR site within approximately 1 mile of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| SANFORD RANCH<br>Facility Id: 09020002<br>Status: Refer: Other Agency | 2321 GREENVALLEY ROA | ESE 1/2 - 1 (0.689 mi.) | 2 | 10 |

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Other Ascertainable Records***

MINES MRDS: Mineral Resources Data System

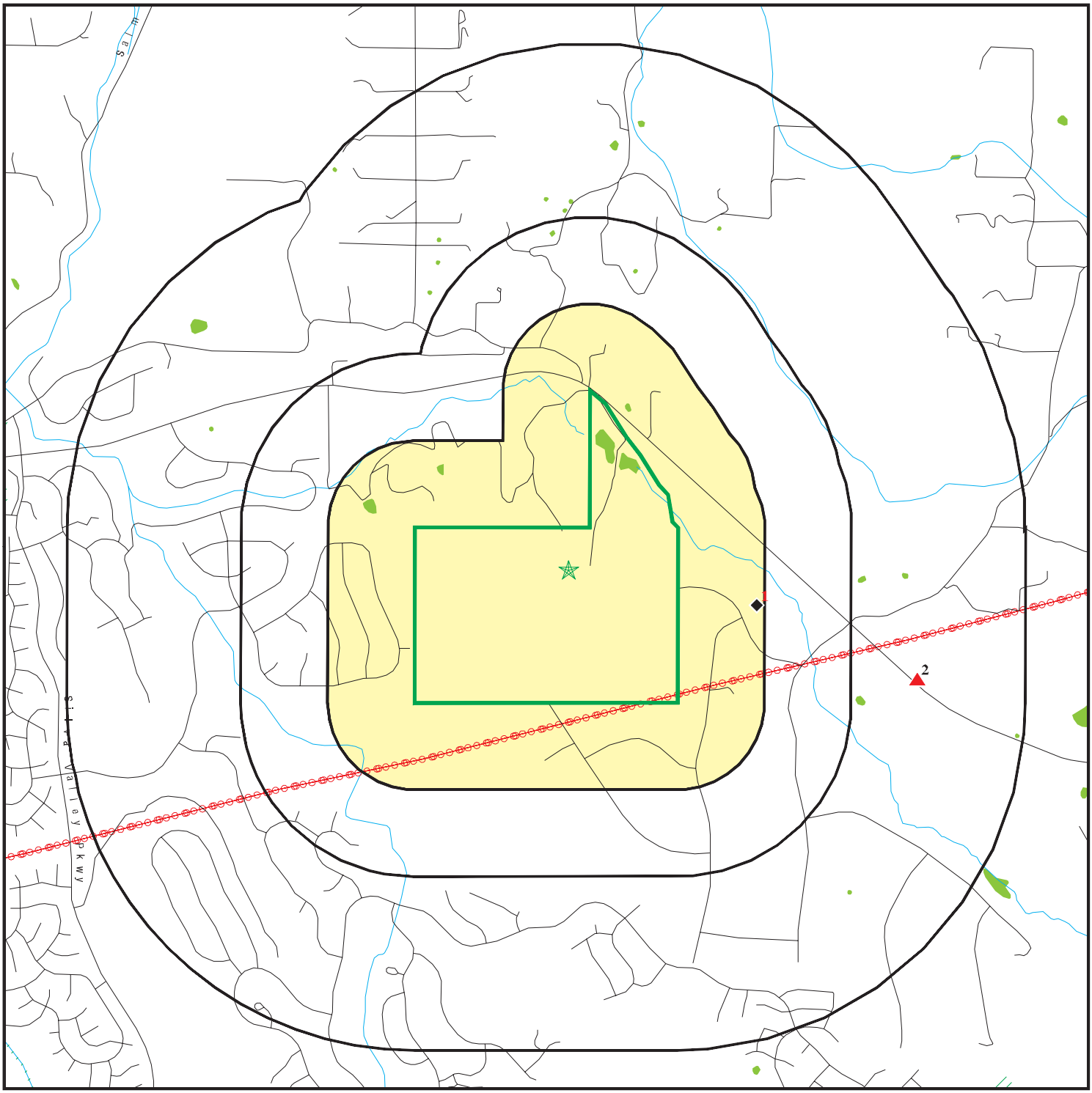
A review of the MINES MRDS list, as provided by EDR, and dated 08/23/2022 has revealed that there is 1 MINES MRDS site within approximately 0.25 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| DORMODY | | E 1/8 - 1/4 (0.227 mi.) | 1 | 9 |

# EXECUTIVE SUMMARY

There were no unmapped sites in this report.

# OVERVIEW MAP - 7624776.2S




Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Power transmission lines

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

Areas of Concern

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

| | |
|---|---|
| SITE NAME: 3200 VERDE VALLE LN<br>ADDRESS: 3200 VERDE VALLE LN<br>EL DORADO HILLS CA 95762<br>LAT/LONG: 38.705513 / 121.046332 | CLIENT: Terraphase Engineering Inc.<br>CONTACT: Hallie Douglas<br>INQUIRY #: 7624776.2s<br>DATE: April 15, 2024 7:27 pm |

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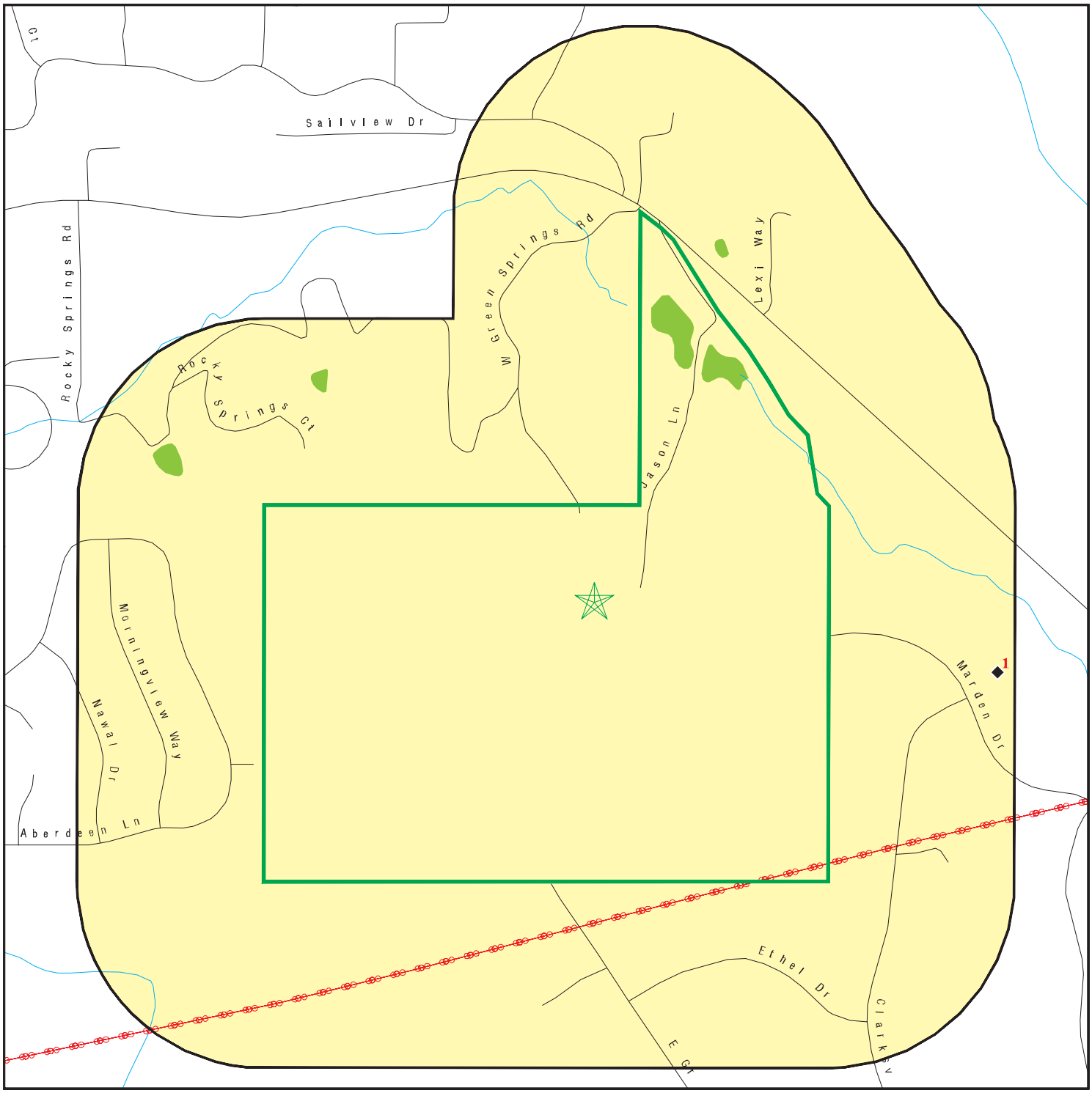
# DETAIL MAP - 7624776.2S




- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites

0 1/8 1/4 1/2 Miles

- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Concern

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

| | |
|---|---|
| SITE NAME: 3200 VERDE VALLE LN<br>ADDRESS: 3200 VERDE VALLE LN<br>EL DORADO HILLS CA 95762<br>LAT/LONG: 38.705513 / 121.046332 | CLIENT: Terraphase Engineering Inc.<br>CONTACT: Hallie Douglas<br>INQUIRY #: 7624776.2s<br>DATE: April 15, 2024 7:28 pm |

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# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| **STANDARD ENVIRONMENTAL RECORDS** | | | | | | | | |
| ***Lists of Federal NPL (Superfund) sites*** | | | | | | | | |
| NPL | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| Proposed NPL | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| NPL LIENS | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***Lists of Federal Delisted NPL sites*** | | | | | | | | |
| Delisted NPL | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***Lists of Federal sites subject to CERCLA removals and CERCLA orders*** | | | | | | | | |
| FEDERAL FACILITY | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| SEMS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of Federal CERCLA sites with NFRAP*** | | | | | | | | |
| SEMS-ARCHIVE | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of Federal RCRA facilities undergoing Corrective Action*** | | | | | | | | |
| CORRACTS | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***Lists of Federal RCRA TSD facilities*** | | | | | | | | |
| RCRA-TSDF | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of Federal RCRA generators*** | | | | | | | | |
| RCRA-LQG | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| RCRA-SQG | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| RCRA-VSQG | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| ***Federal institutional controls / engineering controls registries*** | | | | | | | | |
| LUCIS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| US ENG CONTROLS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| US INST CONTROLS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Federal ERNS list*** | | | | | | | | |
| ERNS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ***Lists of state- and tribal (Superfund) equivalent sites*** | | | | | | | | |
| RESPONSE | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***Lists of state- and tribal hazardous waste facilities*** | | | | | | | | |
| ENVIROSTOR | 1.000 | | 0 | 0 | 0 | 1 | NR | 1 |
| ***Lists of state and tribal landfills and solid waste disposal facilities*** | | | | | | | | |
| SWF/LF | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |

# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| ***Lists of state and tribal leaking storage tanks*** | | | | | | | | |
| LUST | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| INDIAN LUST | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| CPS-SLIC | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of state and tribal registered storage tanks*** | | | | | | | | |
| FEMA UST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| UST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| AST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| INDIAN UST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| ***Lists of state and tribal voluntary cleanup sites*** | | | | | | | | |
| INDIAN VCP | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| VCP | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of state and tribal brownfield sites*** | | | | | | | | |
| BROWNFIELDS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| **ADDITIONAL ENVIRONMENTAL RECORDS** | | | | | | | | |
| ***Local Brownfield lists*** | | | | | | | | |
| US BROWNFIELDS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Local Lists of Landfill / Solid Waste Disposal Sites*** | | | | | | | | |
| WMUDS/SWAT | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| SWRCY | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| HAULERS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| INDIAN ODI | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ODI | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| DEBRIS REGION 9 | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| IHS OPEN DUMPS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Local Lists of Hazardous waste / Contaminated Sites*** | | | | | | | | |
| US HIST CDL | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| HIST Cal-Sites | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| SCH | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| CDL | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| Toxic Pits | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| CERS HAZ WASTE | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| US CDL | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ***Local Lists of Registered Storage Tanks*** | | | | | | | | |
| SWEEPS UST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| HIST UST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| CERS TANKS | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| CA FID UST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| ***Local Land Records*** | | | | | | | | |
| LIENS | 0.001 | | 0 | NR | NR | NR | NR | 0 |

# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| LIENS 2 | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| DEED | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Records of Emergency Release Reports*** | | | | | | | | |
| HMIRS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| CHMIRS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| LDS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| MCS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| SPILLS 90 | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ***Other Ascertainable Records*** | | | | | | | | |
| RCRA NonGen / NLR | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| FUDS | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| DOD | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| SCRD DRYCLEANERS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| US FIN ASSUR | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| EPA WATCH LIST | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| 2020 COR ACTION | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| TSCA | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| TRIS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| SSTS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ROD | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| RMP | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| RAATS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| PRP | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| PADS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ICIS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| FTTS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| MLTS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| COAL ASH DOE | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| COAL ASH EPA | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| PCB TRANSFORMER | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| RADINFO | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| HIST FTTS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| DOT OPS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| CONSENT | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| INDIAN RESERV | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| FUSRAP | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| UMTRA | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| LEAD SMELTERS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| US AIRS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| US MINES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| ABANDONED MINES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| MINES MRDS | 0.250 | | 0 | 1 | NR | NR | NR | 1 |
| FINDS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| UXO | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| DOCKET HWC | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ECHO | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| FUELS PROGRAM | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS NPL | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS FEDERAL SITES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |

# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| PFAS TRIS | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS TSCA | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS RCRA MANIFEST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS ATSDR | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS WQP | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS NPDES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS ECHO | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS ECHO FIRE TRAINING | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS PART 139 AIRPORT | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| AQUEOUS FOAM NRC | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| BIOSOLIDS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| PFAS | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| AQUEOUS FOAM | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| CA BOND EXP. PLAN | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| CHROME PLATING | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| Cortese | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| CUPA Listings | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| DRYCLEANERS | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| EMI | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ENF | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| Financial Assurance | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| ICE | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| HIST CORTESE | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| HWP | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| HWT | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| HWTS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| HAZNET | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| MINES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| MWMP | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| NPDES | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| PEST LIC | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| PROC | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| Notify 65 | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| HAZMAT | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| UIC | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| UIC GEO | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| WASTEWATER PITS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| WDS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| WIP | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| MILITARY PRIV SITES | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| PROJECT | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| WDR | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| CIWQS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| CERS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| NON-CASE INFO | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| OTHER OIL GAS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| PROD WATER PONDS | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| SAMPLING POINT | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| WELL STIM PROJ | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| UST FINDER | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| UST FINDER RELEASE | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |

# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| **EDR HIGH RISK HISTORICAL RECORDS** | | | | | | | | |
| ***EDR Exclusive Records*** | | | | | | | | |
| EDR MGP | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| EDR Hist Auto | 0.125 | | 0 | NR | NR | NR | NR | 0 |
| EDR Hist Cleaner | 0.125 | | 0 | NR | NR | NR | NR | 0 |
| **EDR RECOVERED GOVERNMENT ARCHIVES** | | | | | | | | |
| ***Exclusive Recovered Govt. Archives*** | | | | | | | | |
| RGA LF | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| RGA LUST | 0.001 | | 0 | NR | NR | NR | NR | 0 |
| - Totals -- | | 0 | 0 | 1 | 0 | 1 | 0 | 2 |

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

**1** **DORMODY** **MINES MRDS** **1025688854**
**East** **N/A**
**1/8-1/4** **EL DORADO (County), CA**
**0.227 mi.**
**1198 ft.**

**Relative:**
**Lower**

**Actual:**
**1049 ft.**

MINES MRDS:

| | |
|---|---|
| Name: | DORMODY |
| Address: | Not reported |
| Deposit identification Number: | 10211198 |
| City,State,Zip: | CALIFORNIA |
| URL: | https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10211198 |
| MRDS Identification Number: | M007414 |
| MAS/MILS Identification Number: | 0060170116 |
| Region: | NA |
| Country: | United States |
| Primary Commodities: | Gold |
| Secondary Commodities: | Not reported |
| Tertiary Commodities: | Not reported |
| Operation Type: | Placer |
| Deposit Type: | Not reported |
| Production Size: | Not reported |
| Development Status: | Unknown |
| Ore Minerals or Materials: | Not reported |
| Gangue Minerals or Materials: | Not reported |
| Other Minerals or Materials: | Not reported |
| Ore Body Form: | Not reported |
| Workings Type: | Not reported |
| Mineral Deposit Model: | Not reported |
| Alteration Processes: | Not reported |
| Concentration Processes: | Not reported |
| Previous Names: | Not reported |
| Ore Controls: | Not reported |
| Reporter: | Western Field Operations Center (WFOC) |
| Host Rock Unit Name: | Not reported |
| Host Rock Type: | Not reported |
| Associated Rock Unit Name: | Not reported |
| Associated Rock Type Code: | Not reported |
| Structural Characteristics: | Not reported |
| Tectonic Setting: | Not reported |
| References: | Not reported |
| First Production Year: | Not reported |
| Began Before/After FPY: | Not reported |
| Last Production Year: | Not reported |
| Ended Before/After LPY: | Not reported |
| Year Discovered: | Not reported |
| Found Before/After YD: | Not reported |
| Production History: | Not reported |
| Discovery Information: | Not reported |
| Latitude: | 38.7041 |
| Longitude: | -121.03633 |

**2**
**ESE**
**1/2-1**
**0.689 mi.**
**3637 ft.**

**SANFORD RANCH**
**2321 GREENVALLEY ROAD**
**RESCUE, CA 95672**

**ENVIROSTOR** **S102860834**
**N/A**

**Relative:**
**Higher**

**Actual:**
**1167 ft.**

ENVIROSTOR:

| | |
|---|---|
| Name: | SANFORD RANCH |
| Address: | 2321 GREENVALLEY ROAD |
| City,State,Zip: | RESCUE, CA 95672 |
| Facility ID: | 09020002 |
| Status: | Refer: Other Agency |
| Status Date: | 11/16/1994 |
| Site Code: | Not reported |
| Site Type: | Evaluation |
| Site Type Detailed: | Evaluation |
| Acres: | 1 |
| NPL: | NO |
| Regulatory Agencies: | NONE SPECIFIED |
| Lead Agency: | NONE SPECIFIED |
| Program Manager: | Not reported |
| Supervisor: | Referred - Not Assigned |
| Division Branch: | Cleanup Sacramento |
| Assembly: | 05 |
| Senate: | 04 |
| Special Program: | * Rural County Survey Program |
| Restricted Use: | NO |
| Site Mgmt Req: | NONE SPECIFIED |
| Funding: | Not reported |
| Latitude: | 38.70154 |
| Longitude: | -121.0273 |
| APN: | NONE SPECIFIED |
| Past Use: | NONE SPECIFIED |
| Potential COC: | Polychlorinated biphenyls (PCBs |
| Confirmed COC: | NONE SPECIFIED |
| Potential Description: | NONE SPECIFIED |
| Alias Name: | 09020002 |
| Alias Type: | Envirostor ID Number |

Completed Info:

| | |
|---|---|
| Completed Area Name: | PROJECT WIDE |
| Completed Sub Area Name: | Not reported |
| Completed Document Type: | * Discovery |
| Completed Date: | 02/01/1987 |
| Comments: | FACILITY IDENTIFIED FROM DEPARTMENT OF HEALTH SERVICES (DHS) REGIONAL OFFICE'S FILE. |
| Completed Area Name: | PROJECT WIDE |
| Completed Sub Area Name: | Not reported |
| Completed Document Type: | Preliminary Assessment Report |
| Completed Date: | 12/01/1987 |
| Comments: | PRELIMINARY ASSESSMENT DONE. AWAITING HISTORICAL INFORMATION AND SAMPLE RESULTS FROM PG & E THUS, PENDING STATUS HAZARD MITIGATED. SITE CLEANED ON 3/19/84 BY P.G. & E.; SAMPLES TAKEN-NO FURTHER ACTION. Not reported |
| Completed Area Name: | PROJECT WIDE |
| Completed Sub Area Name: | Not reported |
| Completed Document Type: | Site Screening |
| Completed Date: | 11/16/1987 |

**SANFORD RANCH (Continued)** **S102860834**

| | |
|---|---|
| Comments: | SITE SCREENING DONE. |
| Future Area Name: | Not reported |
| Future Sub Area Name: | Not reported |
| Future Document Type: | Not reported |
| Future Due Date: | Not reported |
| Schedule Area Name: | Not reported |
| Schedule Sub Area Name: | Not reported |
| Schedule Document Type: | Not reported |
| Schedule Due Date: | Not reported |
| Schedule Revised Date: | Not reported |

Count: 0 records.

ORPHAN SUMMARY

| City | EDR ID | Site Name | Site Address | Zip | Database(s) |
|---|---|---|---|---|---|
| | | NO SITES FOUND | | | |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Number of Days to Update:** Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

**STANDARD ENVIRONMENTAL RECORDS**

***Lists of Federal NPL (Superfund) sites***

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 02/29/2024
Date Data Arrived at EDR: 03/01/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 04/02/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 02/29/2024
Date Data Arrived at EDR: 03/01/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 04/02/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

***Lists of Federal Delisted NPL sites***

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 02/29/2024
Date Data Arrived at EDR: 03/01/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 04/02/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Quarterly

***Lists of Federal sites subject to CERCLA removals and CERCLA orders***

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 12/20/2023
Date Data Arrived at EDR: 12/20/2023
Date Made Active in Reports: 01/24/2024
Number of Days to Update: 35

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 03/26/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/29/2024
Date Data Arrived at EDR: 02/01/2024
Date Made Active in Reports: 02/22/2024
Number of Days to Update: 21

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/02/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Quarterly

***Lists of Federal CERCLA sites with NFRAP***

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 01/29/2024
Date Data Arrived at EDR: 02/01/2024
Date Made Active in Reports: 02/22/2024
Number of Days to Update: 21

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/02/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Quarterly

***Lists of Federal RCRA facilities undergoing Corrective Action***

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

***Lists of Federal RCRA TSD facilities***

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

***Lists of Federal RCRA generators***

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

***Federal institutional controls / engineering controls registries***

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 02/14/2024
Date Data Arrived at EDR: 02/16/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 48

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 02/02/2024
Next Scheduled EDR Contact: 05/20/2024
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2024
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/21/2024
Next Scheduled EDR Contact: 06/03/2024
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2024
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/21/2024
Next Scheduled EDR Contact: 06/03/2024
Data Release Frequency: Varies

***Federal ERNS list***

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/12/2023
Date Data Arrived at EDR: 12/13/2023
Date Made Active in Reports: 02/28/2024
Number of Days to Update: 77

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

***Lists of state- and tribal (Superfund) equivalent sites***

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 01/22/2024
Date Data Arrived at EDR: 01/23/2024
Date Made Active in Reports: 04/08/2024
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/23/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Quarterly

***Lists of state- and tribal hazardous waste facilities***

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 01/22/2024
Date Data Arrived at EDR: 01/23/2024
Date Made Active in Reports: 04/08/2024
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/23/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Quarterly

***Lists of state and tribal landfills and solid waste disposal facilities***

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 11/06/2023
Date Data Arrived at EDR: 11/07/2023
Date Made Active in Reports: 02/05/2024
Number of Days to Update: 90

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 02/06/2024
Next Scheduled EDR Contact: 05/20/2024
Data Release Frequency: Quarterly

***Lists of state and tribal leaking storage tanks***

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)

Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/05/2023
Date Made Active in Reports: 02/28/2024
Number of Days to Update: 85

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 03/05/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Quarterly

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/04/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)

Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/05/2023
Date Made Active in Reports: 02/27/2024
Number of Days to Update: 84

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/05/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

***Lists of state and tribal registered storage tanks***

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 11/16/2023
Date Data Arrived at EDR: 11/16/2023
Date Made Active in Reports: 02/13/2024
Number of Days to Update: 89

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases

UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 11/28/2023
Date Data Arrived at EDR: 11/30/2023
Date Made Active in Reports: 02/27/2024
Number of Days to Update: 89

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 03/05/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)

Military ust sites

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/05/2023
Date Made Active in Reports: 02/28/2024
Number of Days to Update: 85

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/05/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Varies

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/05/2023
Date Made Active in Reports: 02/28/2024
Number of Days to Update: 85

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 03/05/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities

A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 03/08/2024
Next Scheduled EDR Contact: 06/24/2024
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/17/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

***Lists of state and tribal voluntary cleanup sites***

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 01/22/2024
Date Data Arrived at EDR: 01/23/2024
Date Made Active in Reports: 04/08/2024
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/23/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 03/18/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

***Lists of state and tribal brownfield sites***

BROWNFIELDS: Considered Brownfieds Sites Listing

A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 12/13/2023
Date Data Arrived at EDR: 12/13/2023
Date Made Active in Reports: 03/07/2024
Number of Days to Update: 85

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Local Brownfield lists***

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 08/15/2023
Date Data Arrived at EDR: 08/30/2023
Date Made Active in Reports: 12/01/2023
Number of Days to Update: 93

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/12/2024
Next Scheduled EDR Contact: 06/24/2024
Data Release Frequency: Semi-Annually

***Local Lists of Landfill / Solid Waste Disposal Sites***

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 01/22/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 11/29/2023
Date Data Arrived at EDR: 11/29/2023
Date Made Active in Reports: 02/23/2024
Number of Days to Update: 86

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/05/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 11/16/2022
Date Data Arrived at EDR: 11/22/2022
Date Made Active in Reports: 02/13/2023
Number of Days to Update: 83

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 05/20/2024
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 01/26/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 01/11/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176
Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Varies

***Local Lists of Hazardous waste / Contaminated Sites***

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/21/2024
Next Scheduled EDR Contact: 06/03/2024
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database
The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21
Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program
This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 01/22/2024
Date Data Arrived at EDR: 01/23/2024
Date Made Active in Reports: 04/08/2024
Number of Days to Update: 76
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/23/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs
A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 09/28/2023
Date Made Active in Reports: 12/18/2023
Number of Days to Update: 81
Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 03/08/2024
Next Scheduled EDR Contact: 05/13/2024
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites
Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27
Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CERS HAZ WASTE: California Environmental Reporting System Hazardous Waste

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 01/16/2024
Date Data Arrived at EDR: 01/16/2024
Date Made Active in Reports: 04/03/2024
Number of Days to Update: 78

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 01/16/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Quarterly

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/21/2024
Next Scheduled EDR Contact: 06/03/2024
Data Release Frequency: Quarterly

***Local Lists of Registered Storage Tanks***

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing

Aboveground storage tank sites

Date of Government Version: 10/30/2023
Date Data Arrived at EDR: 11/01/2023
Date Made Active in Reports: 01/23/2024
Number of Days to Update: 83

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 01/29/2024
Next Scheduled EDR Contact: 05/13/2024
Data Release Frequency: Varies

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CERS TANKS: California Environmental Reporting System (CERS) Tanks

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 01/16/2024
Date Data Arrived at EDR: 01/16/2024
Date Made Active in Reports: 04/03/2024
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 01/16/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Quarterly

***Local Land Records***

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 11/21/2023
Date Data Arrived at EDR: 11/22/2023
Date Made Active in Reports: 02/16/2024
Number of Days to Update: 86

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/26/2024
Next Scheduled EDR Contact: 06/10/2024
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/29/2024
Date Data Arrived at EDR: 03/01/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 04/02/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 11/22/2023
Date Data Arrived at EDR: 11/22/2023
Date Made Active in Reports: 02/15/2024
Number of Days to Update: 85

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 02/27/2024
Next Scheduled EDR Contact: 06/10/2024
Data Release Frequency: Semi-Annually

***Records of Emergency Release Reports***

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/12/2023
Date Data Arrived at EDR: 12/13/2023
Date Made Active in Reports: 02/28/2024
Number of Days to Update: 77

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/20/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System
California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 01/23/2024
Date Made Active in Reports: 04/09/2024
Number of Days to Update: 77

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 01/18/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)
Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/05/2023
Date Made Active in Reports: 02/27/2024
Number of Days to Update: 84

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/05/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)
Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/05/2023
Date Made Active in Reports: 02/28/2024
Number of Days to Update: 85

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/05/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch
Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

***Other Ascertainable Records***

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/30/2024
Date Data Arrived at EDR: 02/13/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 51

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 02/13/2024
Next Scheduled EDR Contact: 05/27/2024
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/11/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/04/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 07/30/2021
Date Data Arrived at EDR: 02/03/2023
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 02/06/2024
Next Scheduled EDR Contact: 05/20/2024
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 12/11/2023
Date Data Arrived at EDR: 12/13/2023
Date Made Active in Reports: 02/28/2024
Number of Days to Update: 77

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/13/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA Watch List

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88
Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 01/29/2024
Next Scheduled EDR Contact: 05/13/2024
Data Release Frequency: No Update Planned

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73
Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 02/02/2024
Next Scheduled EDR Contact: 05/13/2024
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 06/14/2022
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 283
Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/14/2024
Next Scheduled EDR Contact: 06/24/2024
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2022
Date Data Arrived at EDR: 11/13/2023
Date Made Active in Reports: 02/07/2024
Number of Days to Update: 86
Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/15/2024
Next Scheduled EDR Contact: 05/27/2024
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 01/16/2024
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 70
Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 02/29/2024
Date Data Arrived at EDR: 03/01/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 26

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 04/02/2024
Next Scheduled EDR Contact: 06/10/2024
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 02/01/2024
Date Data Arrived at EDR: 02/08/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 01/12/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 04/02/2024
Next Scheduled EDR Contact: 05/13/2024
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 03/20/2023
Date Data Arrived at EDR: 04/04/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 66

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/04/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 03/28/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/02/2024
Date Data Arrived at EDR: 01/16/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 57

Source: Nuclear Regulatory Commission
Telephone: 301-415-0717
Last EDR Contact: 01/11/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2022
Date Data Arrived at EDR: 11/27/2023
Date Made Active in Reports: 02/22/2024
Number of Days to Update: 87

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 02/23/2024
Next Scheduled EDR Contact: 06/10/2024
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 02/23/2024
Next Scheduled EDR Contact: 06/10/2024
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 02/02/2024
Next Scheduled EDR Contact: 05/13/2024
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 03/25/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80
Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 01/05/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 01/11/2024
Date Made Active in Reports: 01/16/2024
Number of Days to Update: 5

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 03/28/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/04/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 03/03/2023
Date Data Arrived at EDR: 03/03/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 98

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 01/29/2024
Next Scheduled EDR Contact: 05/13/2024
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 02/15/2024
Next Scheduled EDR Contact: 05/27/2024
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 02/29/2024
Date Data Arrived at EDR: 03/01/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 04/02/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 01/02/2024
Date Data Arrived at EDR: 01/03/2024
Date Made Active in Reports: 01/04/2024
Number of Days to Update: 1

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 04/04/2024
Next Scheduled EDR Contact: 05/20/2024
Data Release Frequency: Quarterly

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/05/2024
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 02/21/2024
Next Scheduled EDR Contact: 06/03/2024
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 01/07/2022
Date Data Arrived at EDR: 02/24/2023
Date Made Active in Reports: 05/17/2023
Number of Days to Update: 82

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 02/22/2024
Next Scheduled EDR Contact: 06/03/2024
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 02/22/2024
Next Scheduled EDR Contact: 06/03/2024
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 11/28/2023
Date Data Arrived at EDR: 11/29/2023
Date Made Active in Reports: 12/11/2023
Number of Days to Update: 12

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 03/15/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Quarterly

MINES MRDS: Mineral Resources Data System

Mineral Resources Data System

Date of Government Version: 08/23/2022
Date Data Arrived at EDR: 11/22/2022
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 98

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 02/22/2024
Next Scheduled EDR Contact: 06/03/2024
Data Release Frequency: Varies

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/03/2023
Date Data Arrived at EDR: 11/08/2023
Date Made Active in Reports: 11/20/2023
Number of Days to Update: 12

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 02/27/2024
Next Scheduled EDR Contact: 06/10/2024
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 12/17/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 04/04/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 02/20/2024
Next Scheduled EDR Contact: 06/03/2024
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/06/2023
Date Data Arrived at EDR: 09/13/2023
Date Made Active in Reports: 12/11/2023
Number of Days to Update: 89

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/08/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/12/2024
Date Data Arrived at EDR: 02/13/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 51

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 02/13/2024
Next Scheduled EDR Contact: 05/27/2024
Data Release Frequency: Quarterly

PFAS NPL: Superfund Sites with PFAS Detections Information

EPA's Office of Land and Emergency Management and EPA Regional Offices maintain data describing what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment.

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 703-603-8895
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

PFAS FEDERAL SITES: Federal Sites PFAS Information

Several federal entities, such as the federal Superfund program, Department of Defense, National Aeronautics and Space Administration, Department of Transportation, and Department of Energy provided information for sites with known or suspected detections at federal facilities.

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

PFAS TRIS: List of PFAS Added to the TRI

Section 7321 of the National Defense Authorization Act for Fiscal Year 2020 (NDAA) immediately added certain per- and polyfluoroalkyl substances (PFAS) to the list of chemicals covered by the Toxics Release Inventory (TRI) under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and provided a framework for additional PFAS to be added to TRI on an annual basis.

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 01/04/2024
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-566-0250
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

PFAS TSCA: PFAS Manufacture and Imports Information

EPA issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. EPA publishes non-confidential business information (non-CBI) and includes descriptive information about each site, corporate parent, production volume, other manufacturing information, and processing and use information.

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 01/04/2024
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

PFAS RCRA MANIFEST: PFAS Transfers Identified In the RCRA Database Listing

To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: PFAS, PFOA, PFOS, PERFL, AFFF, GENX, GEN-X (plus the VT waste codes). These keywords were searched for in the following text fields: Manifest handling instructions (MANIFEST_HANDLING_INSTR), Non-hazardous waste description (NON_HAZ_WASTE_DESCRIPTION), DOT printed information (DOT_PRINTED_INFORMATION), Waste line handling instructions (WASTE_LINE_HANDLING_INSTR), Waste residue comments (WASTE_RESIDUE_COMMENTS).

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 01/04/2024
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

PFAS ATSDR: PFAS Contamination Site Location Listing

PFAS contamination site locations from the Department of Health & Human Services, Center for Disease Control & Prevention. ATSDR is involved at a number of PFAS-related sites, either directly or through assisting state and federal partners. As of now, most sites are related to drinking water contamination connected with PFAS production facilities or fire training areas where aqueous film-forming firefighting foam (AFFF) was regularly used.

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 03/17/2021
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 601

Source: Department of Health & Human Services
Telephone: 202-741-5770
Last EDR Contact: 01/22/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Varies

PFAS WQP: Ambient Environmental Sampling for PFAS

The Water Quality Portal (WQP) is a part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations and individuals submit project details and sampling results to this public repository. The information is commonly used for research and assessments of environmental quality.

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

PFAS NPDES: Clean Water Act Discharge Monitoring Information

Any discharger of pollutants to waters of the United States from a point source must have a National Pollutant Discharge Elimination System (NPDES) permit. The process for obtaining limits involves the regulated entity (permittee) disclosing releases in a NPDES permit application and the permitting authority (typically the state but sometimes EPA) deciding whether to require monitoring or monitoring with limits. Caveats and Limitations: Less than half of states have required PFAS monitoring for at least one of their permittees and fewer states have established PFAS effluent limits for permittees. New rulemakings have been initiated that may increase the number of facilities monitoring for PFAS in the future.

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

PFAS ECHO: Facilities in Industries that May Be Handling PFAS Listing

Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

PFAS ECHO FIRE TRAINING: Facilities in Industries that May Be Handling PFAS Listing

A list of fire training sites was added to the Industry Sectors dataset using a keyword search on the permitted facilitys name to identify sites where fire-fighting foam may have been used in training exercises. Additionally, you may view an example spreadsheet of the subset of fire training facility data, as well as the keywords used in selecting or deselecting a facility for the subset. as well as the keywords used in selecting or deselecting a facility for the subset. These keywords were tested to maximize accuracy in selecting facilities that may use fire-fighting foam in training exercises, however, due to the lack of a required reporting field in the data systems for designating fire training sites, this methodology may not identify all fire training sites or may potentially misidentify them.

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

PFAS PART 139 AIRPORT: All Certified Part 139 Airports PFAS Information Listing

Since July 1, 2006, all certified part 139 airports are required to have fire-fighting foam onsite that meet military specifications (MIL-F-24385) (14 CFR 139.317). To date, these military specification fire-fighting foams are fluorinated and have been historically used for training and extinguishing. The 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. The Federal Aviation Administration?s document AC 150/5210-6D - Aircraft Fire Extinguishing Agents provides guidance on Aircraft Fire Extinguishing Agents, which includes Aqueous Film Forming Foam (AFFF).

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

AQUEOUS FOAM NRC: Aqueous Foam Related Incidents Listing

The National Response Center (NRC) serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. The spreadsheets posted to the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the ?Material Involved? or ?Incident Description? fields.

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-267-2675
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 12/16/2016
Date Data Arrived at EDR: 01/06/2017
Date Made Active in Reports: 03/10/2017
Number of Days to Update: 63

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 03/29/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: No Update Planned

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 03/29/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

BIOSOLIDS: ICIS-NPDES Biosolids Facility Data

The data reflects compliance information about facilities in the biosolids program.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 01/03/2024
Date Made Active in Reports: 01/16/2024
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 202-564-4700
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 11/30/2023
Date Data Arrived at EDR: 11/30/2023
Date Made Active in Reports: 02/26/2024
Number of Days to Update: 88

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/06/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Varies

AQUEOUS FOAM: Former Fire Training Facility Assessments Listing

Airports shown on this list are those believed to use Aqueous Film Forming Foam (AFFF), and certified by the Federal Aviation Administration (FAA) under Title 14, Code of Federal Regulations (CFR), Part 139 (14 CFR Part 139). This list was created by SWRCB using information available from the FAA. Location points shown are from the latitude and longitude listed on the FAA airport master record.

Date of Government Version: 11/30/2023
Date Data Arrived at EDR: 11/30/2023
Date Made Active in Reports: 02/23/2024
Number of Days to Update: 85

Source: State Water Resources Control Board
Telephone: 916-341-5455
Last EDR Contact: 03/05/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Varies

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CHROME PLATING: Chrome Plating Facilities Listing

This listing represents chrome plating facilities the California State Water Resources Control Board staff identified as possibly being a source of Per- and polyfluoroalkyl substance (PFAS) contamination. Sites and locations were identified by staff with the Division of Water Quality in the California State Water Board. Data was collected from the CA Air Resources Board 2013 and 2018 - Cr VI emission survey, CA Emission Inventory, CA HAZ Waste discharge database and by reviewing storm water permits. Former chrome plating sites are also included that are open site investigation or remediation cases with the Regional Water Quality Control Boards and the Department of Toxic Substances Control.

Date of Government Version: 11/30/2023
Date Data Arrived at EDR: 11/30/2023
Date Made Active in Reports: 02/23/2024
Number of Days to Update: 85

Source: State Water Resources Control Board
Telephone: 916-341-5455
Last EDR Contact: 03/05/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Varies

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 12/13/2023
Date Data Arrived at EDR: 12/13/2023
Date Made Active in Reports: 03/07/2024
Number of Days to Update: 85

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing

list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 03/31/2023
Date Data Arrived at EDR: 05/08/2023
Date Made Active in Reports: 07/31/2023
Number of Days to Update: 84

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 02/09/2024
Next Scheduled EDR Contact: 05/20/2024
Data Release Frequency: Varies

DRYCLEAN GLENN CO DIST: Glenn County Air Pollution Control District Drycleaner Facility Listing

A listing of drycleaner facility locations, for the Glenn County Air Pollution Control District.

Date of Government Version: 01/08/2024
Date Data Arrived at EDR: 01/10/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 77

Source: Glenn County Air Pollution Control District
Telephone: 530-934-6500
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN BUTTE CO DIST: Butte County Air Quality Management DistrictDrycleaner Facility Listing

Butte County Air Quality Management DistrictDrycleaner Facility Listing.

Date of Government Version: 04/25/2023
Date Data Arrived at EDR: 10/18/2023
Date Made Active in Reports: 01/16/2024
Number of Days to Update: 90

Source: Butte County Air Quality Management District
Telephone: 530-332-9400
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN NO SONOMA CO DIST: Norther Sonoma County County Air Pollution Control District Drycleaner Facility Listing

A listing of drycleaner facility locations, for the Northern Sonoma County Air Pollution Control District.,

Date of Government Version: 01/05/2024
Date Data Arrived at EDR: 01/10/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 77

Source: Santa Barbara County Air Pollution Control District
Telephone: 707-433-5911
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SACRAMENTO METO DIST: Sacramento Metropolitan Air Quality Management DistrictDrycleaner Facility Listing
A listing of drycleaner facility locations, for the Sacramento Metropolitan Air Quality Management District.

Date of Government Version: 01/03/2024
Date Data Arrived at EDR: 01/10/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 77
Source: Sacramento Metropolitan Air Quality Management District
Telephone: 916-874-3958
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 11/21/2023
Date Data Arrived at EDR: 11/22/2023
Date Made Active in Reports: 02/16/2024
Number of Days to Update: 86
Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 02/26/2024
Next Scheduled EDR Contact: 06/10/2024
Data Release Frequency: Varies

DRYCLEAN AMADOR: Amador Air District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Amador Air Quality Management District

Date of Government Version: 04/26/2023
Date Data Arrived at EDR: 04/27/2023
Date Made Active in Reports: 07/13/2023
Number of Days to Update: 77
Source: Amador Air Quality Management District
Telephone: 209-257-0112
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN VENTURA CO DIST: Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Ventura County Air Pollution Control District.

Date of Government Version: 01/04/2024
Date Data Arrived at EDR: 01/16/2024
Date Made Active in Reports: 02/08/2024
Number of Days to Update: 23
Source: Ventura County Air Pollution Control District
Telephone: 805-645-1421
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 11/14/2023
Date Data Arrived at EDR: 11/16/2023
Date Made Active in Reports: 02/12/2024
Number of Days to Update: 88
Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 02/20/2024
Next Scheduled EDR Contact: 06/03/2024
Data Release Frequency: Varies

DRYCLEAN SANTA BARB CO DIST: Santa Barbara County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Santa Barbara County Air Pollution Control District.

Date of Government Version: 02/19/2019
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1475
Source: Santa Barbara County Air Pollution Control District
Telephone: 805-961-8867
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN NO SIERRA DIST: Northern Sierra Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Northern Sierra Air Quality Management District,

Date of Government Version: 05/07/2019
Date Data Arrived at EDR: 05/07/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1455
Source: Northern Sierra Air Quality Management District
Telephone: 530-274-9350
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN NO COAST UNIFIED DIST: North Coast Unified Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the North Coast Unified Air Quality Management District.

Date of Government Version: 11/30/2016
Date Data Arrived at EDR: 04/19/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1473
Source: North Coast Unified Air Quality Management District
Telephone: 707-443-3093
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN LAKE CO DIST: Lake County Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Lake County Air Quality Management District,

Date of Government Version: 04/29/2019
Date Data Arrived at EDR: 05/07/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1455
Source: Lake County Air Quality Management District
Telephone: 707-263-7000
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN GRANT: Grant Recipients List
Assembly Bill 998 (AB 998) established the Non-Toxic Dry Cleaning Incentive Program to provide financial assistance to the dry cleaning industry to switch from systems using perchloroethylene (Perc), an identified toxic air contaminant and potential human carcinogen, to non-toxic and non-smog forming alternatives.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 02/04/2021
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 816
Source: California Air Resources Board
Telephone: 916-323-0006
Last EDR Contact: 01/26/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Varies

DRYCLEAN CALAVERAS CO DIST: Calaveras County Environmental Management Agency Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Calaveras County Environmental Management Agency.

Date of Government Version: 06/17/2019
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1412
Source: Calaveras County Environmental Management Agency
Telephone: 209-754-6399
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Varies

DRYCLEAN BAY AREA DIST: Bay Area Air Quality Management District Drycleaner Facility Listing
Bay Area Air Quality Management District Drycleaner Facility Listing.

Date of Government Version: 02/20/2019
Date Data Arrived at EDR: 05/30/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1432
Source: Bay Area Air Quality Management District
Telephone: 415-516-1916
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN FEATHER RIVER DIST: Feather River Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Feather River Air Quality Management District.

Date of Government Version: 03/08/2023
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 06/05/2023
Number of Days to Update: 88
Source: Feather River Air Quality Management District
Telephone: 530-634-7659
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN TEHAMA CO DIST: Tehama County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Tehama County Air Pollution Control District.

Date of Government Version: 04/24/2019
Date Data Arrived at EDR: 04/24/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1468
Source: Tehama County Air Pollution Control District
Telephone: 530-527-3717
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 08/31/2023
Date Data Arrived at EDR: 09/08/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 80

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 03/08/2024
Next Scheduled EDR Contact: 06/10/2024
Data Release Frequency: Annually

DRYCLEAN SAN DIEGO CO DIST: San Diego County Air Pollution Control District Drycleaner Facility Listing

A listing of drycleaner facility locations, for the San Diego County Air Pollution Control District.

Date of Government Version: 03/19/2024
Date Data Arrived at EDR: 03/21/2024
Date Made Active in Reports: 04/12/2024
Number of Days to Update: 22

Source: San Diego County Air Pollution Control District
Telephone: 858-586-2616
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN EAST KERN DIST: Eastern Kern Air Pollution Control District District Drycleaner Facility Listing

A listing of drycleaner facility locations, for the Eastern Kern Air Pollution Control District.

Date of Government Version: 01/12/2023
Date Data Arrived at EDR: 04/26/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 79

Source: Eastern Kern Air Pollution Control District
Telephone: 661-862-9684
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN IMPERIAL CO DIST: Imperial County Air Pollution Control District Drycleaner Facility Listing

A listing of drycleaner facility locations, for the Imperial County Air Pollution Control District

Date of Government Version: 04/25/2023
Date Data Arrived at EDR: 04/26/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 79

Source: Imperial County Air Pollution Control District
Telephone: 442-265-1800
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN MENDO CO DIST: Mendocino County Air Quality Management District Drycleaner Facility Listing

A listing of drycleaner facility locations, for the Mendocino County Air Quality Management District.

Date of Government Version: 04/27/2023
Date Data Arrived at EDR: 04/28/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 77

Source: Mendocino County Air Quality Management District
Telephone: 707-463-4354
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN MOJAVE DESERT DIST: Mojave Desert Air Quality Management District Drycleaner Facility Listing

A listing of drycleaner facility locations, for the Mojave Desert Air Quality Management District.

Date of Government Version: 04/26/2023
Date Data Arrived at EDR: 04/27/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 78

Source: Mojave Desert Air Quality Management District
Telephone: 760-245-1661
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN YOLO-SOLANO DIST: Yolo-Solano Air Quality Management District Drycleaner Facility Listing

A listing of drycleaner facility locations, for the Yolo-Solano Air Quality Management District.

Date of Government Version: 01/04/2024
Date Data Arrived at EDR: 01/05/2024
Date Made Active in Reports: 03/20/2024
Number of Days to Update: 75

Source: Yolo-Solano Air Quality Management District
Telephone: 530-757-3650
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SHASTA CO DIST: Shasta County Air Quality Management District District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Shasta County Air Quality Management District.

Date of Government Version: 04/26/2023
Date Data Arrived at EDR: 04/27/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 78

Source: Shasta County Air Quality Management District
Telephone: 530-225-5674
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN MONTEREY BAY DIST: Monterey Bay Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Monterey Bay Air Quality Management District.

Date of Government Version: 01/03/2024
Date Data Arrived at EDR: 01/05/2024
Date Made Active in Reports: 03/20/2024
Number of Days to Update: 75

Source: Monterey Bay Air Quality Management District
Telephone: 831-647-9411
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SAN LUIS OB CO DIST: San Luis Obispo County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the San Luis Obispo County Air Pollution Control District.

Date of Government Version: 01/03/2024
Date Data Arrived at EDR: 01/04/2024
Date Made Active in Reports: 03/20/2024
Number of Days to Update: 76

Source: San Luis Obispo County Air Pollution Control District
Telephone: 805-781-5756
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN PLACER CO DIST: Placer County Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Placer County Air Quality Management District.

Date of Government Version: 05/15/2023
Date Data Arrived at EDR: 05/17/2023
Date Made Active in Reports: 08/14/2023
Number of Days to Update: 89

Source: Placer County Air Quality Management District
Telephone: 530-745-2335
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SAN JOAQ VAL DIST: San Joaquin Valley Air Pollution Control District District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the San Joaquin Valley Air Pollution Control District.

Date of Government Version: 01/04/2024
Date Data Arrived at EDR: 01/04/2024
Date Made Active in Reports: 03/21/2024
Number of Days to Update: 77

Source: San Joaquin Valley Air Pollution Control District
Telephone: 559-230-6001
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

EMI: Emissions Inventory Data
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 06/09/2023
Date Made Active in Reports: 08/30/2023
Number of Days to Update: 82

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 03/14/2024
Next Scheduled EDR Contact: 06/24/2024
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 01/16/2024
Date Data Arrived at EDR: 01/16/2024
Date Made Active in Reports: 04/03/2024
Number of Days to Update: 78

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 01/16/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 01/11/2024
Date Data Arrived at EDR: 01/16/2024
Date Made Active in Reports: 04/03/2024
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 11/08/2023
Date Data Arrived at EDR: 11/22/2023
Date Made Active in Reports: 02/16/2024
Number of Days to Update: 86

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 02/20/2024
Next Scheduled EDR Contact: 05/20/2024
Data Release Frequency: Varies

ICE: Inspection, Compliance and Enforcement

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 02/07/2024
Date Data Arrived at EDR: 02/07/2024
Date Made Active in Reports: 02/07/2024
Number of Days to Update: 0

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 02/07/2024
Next Scheduled EDR Contact: 05/27/2024
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 02/07/2024
Date Data Arrived at EDR: 02/07/2024
Date Made Active in Reports: 02/07/2024
Number of Days to Update: 0

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/07/2024
Next Scheduled EDR Contact: 05/27/2024
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 01/02/2024
Date Data Arrived at EDR: 01/03/2024
Date Made Active in Reports: 03/21/2024
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 04/04/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Quarterly

HWTS: Hazardous Waste Tracking System

DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.

Date of Government Version: 10/26/2023
Date Data Arrived at EDR: 10/27/2023
Date Made Active in Reports: 01/29/2024
Number of Days to Update: 94

Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 03/28/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 01/03/2024
Date Made Active in Reports: 03/21/2024
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 04/04/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Annually

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 11/29/2023
Date Data Arrived at EDR: 11/29/2023
Date Made Active in Reports: 02/23/2024
Number of Days to Update: 86

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 03/05/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 11/08/2023
Date Data Arrived at EDR: 11/22/2023
Date Made Active in Reports: 02/16/2024
Number of Days to Update: 86

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 02/27/2024
Next Scheduled EDR Contact: 06/10/2024
Data Release Frequency: Varies

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 11/06/2023
Date Data Arrived at EDR: 11/07/2023
Date Made Active in Reports: 02/05/2024
Number of Days to Update: 90

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 02/06/2024
Next Scheduled EDR Contact: 05/20/2024
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing

A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 11/22/2023
Date Data Arrived at EDR: 11/22/2023
Date Made Active in Reports: 02/16/2024
Number of Days to Update: 86

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 02/27/2024
Next Scheduled EDR Contact: 06/10/2024
Data Release Frequency: Quarterly

PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 11/29/2023
Date Data Arrived at EDR: 11/29/2023
Date Made Active in Reports: 02/23/2024
Number of Days to Update: 86

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/05/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 12/06/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 02/29/2024
Number of Days to Update: 85

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 03/08/2024
Next Scheduled EDR Contact: 06/24/2024
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 11/03/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 82

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 01/29/2024
Next Scheduled EDR Contact: 05/13/2024
Data Release Frequency: Annually

SANTA CRUZ CO SITE MITI: Site Mitigation Listing

Sites may become contaminated with toxic chemicals through illegal dumping or disposal, from leaking underground storage tanks, or through industrial or commercial activities.The goal of the site mitigation program is to protect the public health and the environment while facilitating completion of contaminated site clean-up projects in a timely manner.

Date of Government Version: 12/03/2018
Date Data Arrived at EDR: 06/23/2023
Date Made Active in Reports: 07/13/2023
Number of Days to Update: 20

Source: Santa Cruz Environmental Health Services
Telephone: 831-454-2761
Last EDR Contact: 02/09/2024
Next Scheduled EDR Contact: 05/27/2024
Data Release Frequency: Varies

UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 11/29/2023
Date Data Arrived at EDR: 11/29/2023
Date Made Active in Reports: 02/27/2024
Number of Days to Update: 90

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 03/05/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/05/2023
Date Made Active in Reports: 02/28/2024
Number of Days to Update: 85

Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/05/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 02/11/2021
Date Data Arrived at EDR: 07/01/2021
Date Made Active in Reports: 09/29/2021
Number of Days to Update: 90

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 04/04/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 02/09/2024
Next Scheduled EDR Contact: 05/27/2024
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 03/15/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/05/2023
Date Made Active in Reports: 02/28/2024
Number of Days to Update: 85

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/05/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/05/2023
Date Made Active in Reports: 02/28/2024
Number of Days to Update: 85

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/05/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing
In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 11/29/2023
Date Data Arrived at EDR: 11/29/2023
Date Made Active in Reports: 02/22/2024
Number of Days to Update: 85
Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 03/05/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 11/22/2023
Date Data Arrived at EDR: 11/22/2023
Date Made Active in Reports: 02/16/2024
Number of Days to Update: 86
Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 02/27/2024
Next Scheduled EDR Contact: 06/10/2024
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 01/16/2024
Date Data Arrived at EDR: 01/16/2024
Date Made Active in Reports: 04/03/2024
Number of Days to Update: 78
Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 01/16/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/05/2023
Date Made Active in Reports: 02/28/2024
Number of Days to Update: 85
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/05/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/05/2023
Date Made Active in Reports: 02/28/2024
Number of Days to Update: 85
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/05/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)

Produced water ponds sites

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/05/2023
Date Made Active in Reports: 02/28/2024
Number of Days to Update: 85
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/05/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)

Sampling point - public sites

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/05/2023
Date Made Active in Reports: 02/28/2024
Number of Days to Update: 85

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/05/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)

Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/05/2023
Date Made Active in Reports: 02/28/2024
Number of Days to Update: 85

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/05/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Varies

UST FINDER: UST Finder Database

EPA developed UST Finder, a web map application containing a comprehensive, state-sourced national map of underground storage tank (UST) and leaking UST (LUST) data. It provides the attributes and locations of active and closed USTs, UST facilities, and LUST sites from states and from Tribal lands and US territories . UST Finder contains information about proximity of UST facilities and LUST sites to: surface and groundwater public drinking water protection areas; estimated number of private domestic wells and number of people living nearby; and flooding and wildfires.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/04/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 106

Source: Environmental Protection Agency
Telephone: 202-564-0394
Last EDR Contact: 02/09/2024
Next Scheduled EDR Contact: 05/20/2024
Data Release Frequency: Varies

UST FINDER RELEASE: UST Finder Releases Database

US EPA's UST Finder data is a national composite of leaking underground storage tanks. This data contains information about, and locations of, leaking underground storage tanks. Data was collected from state sources and standardized into a national profile by EPA's Office of Underground Storage Tanks, Office of Research and Development, and the Association of State and Territorial Solid Waste Management Officials.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/31/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 79

Source: Environmental Protecton Agency
Telephone: 202-564-0394
Last EDR Contact: 02/09/2024
Next Scheduled EDR Contact: 05/20/2024
Data Release Frequency: Semi-Annually

**EDR HIGH RISK HISTORICAL RECORDS**

***EDR Exclusive Records***

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

**EDR RECOVERED GOVERNMENT ARCHIVES**

***Exclusive Recovered Govt. Archives***

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

**COUNTY RECORDS**

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites
A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 03/28/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks
Underground storage tank sites located in Alameda county.

Date of Government Version: 12/26/2023
Date Data Arrived at EDR: 12/26/2023
Date Made Active in Reports: 03/19/2024
Number of Days to Update: 84

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 03/28/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 04/27/2023
Date Data Arrived at EDR: 04/27/2023
Date Made Active in Reports: 07/13/2023
Number of Days to Update: 77

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 04/26/2023
Next Scheduled EDR Contact: 05/13/2024
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 03/28/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 12/18/2023
Date Data Arrived at EDR: 12/18/2023
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 86

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 03/15/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 78

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 01/29/2024
Next Scheduled EDR Contact: 05/13/2024
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 01/19/2024
Date Data Arrived at EDR: 01/24/2024
Date Made Active in Reports: 04/09/2024
Number of Days to Update: 76

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 01/22/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 10/25/2023
Date Made Active in Reports: 01/16/2024
Number of Days to Update: 83

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 02/05/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 08/08/2022
Date Data Arrived at EDR: 08/09/2022
Date Made Active in Reports: 09/01/2022
Number of Days to Update: 23

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 01/22/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 06/28/2021
Date Data Arrived at EDR: 12/21/2021
Date Made Active in Reports: 03/03/2022
Number of Days to Update: 72

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 03/28/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 08/12/2021
Date Data Arrived at EDR: 08/12/2021
Date Made Active in Reports: 11/08/2021
Number of Days to Update: 88

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 02/09/2024
Next Scheduled EDR Contact: 05/27/2024
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 01/17/2024
Date Data Arrived at EDR: 01/18/2024
Date Made Active in Reports: 04/03/2024
Number of Days to Update: 76

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 02/09/2024
Next Scheduled EDR Contact: 05/27/2024
Data Release Frequency: Varies

KERN COUNTY:

CUPA KERN: CUPA Facility List
A listing of sites included in the Kern County Hazardous Material Business Plan.

Date of Government Version: 10/30/2023
Date Data Arrived at EDR: 11/01/2023
Date Made Active in Reports: 01/23/2024
Number of Days to Update: 83

Source: Kern County Public Health
Telephone: 661-321-3000
Last EDR Contact: 02/12/2024
Next Scheduled EDR Contact: 05/13/2024
Data Release Frequency: Varies

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 10/30/2023
Date Data Arrived at EDR: 11/01/2023
Date Made Active in Reports: 01/23/2024
Number of Days to Update: 83

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 02/12/2024
Next Scheduled EDR Contact: 05/13/2024
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 12/03/2020
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/14/2021
Number of Days to Update: 78

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 02/09/2024
Next Scheduled EDR Contact: 05/27/2024
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 10/27/2023
Date Data Arrived at EDR: 11/01/2023
Date Made Active in Reports: 11/21/2023
Number of Days to Update: 20

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 04/08/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 07/31/2020
Date Data Arrived at EDR: 08/21/2020
Date Made Active in Reports: 11/09/2020
Number of Days to Update: 80

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 03/08/2024
Next Scheduled EDR Contact: 06/24/2024
Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 01/16/2024
Date Data Arrived at EDR: 01/18/2024
Date Made Active in Reports: 03/26/2024
Number of Days to Update: 68

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/09/2024
Date Data Arrived at EDR: 01/10/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 77

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 04/09/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 12/31/2022
Date Data Arrived at EDR: 01/12/2023
Date Made Active in Reports: 03/29/2023
Number of Days to Update: 76

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills
This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/13/2023
Date Data Arrived at EDR: 07/13/2023
Date Made Active in Reports: 09/27/2023
Number of Days to Update: 76

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 04/11/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory
A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 12/01/2023
Date Data Arrived at EDR: 12/13/2023
Date Made Active in Reports: 12/14/2023
Number of Days to Update: 1

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory
A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 12/01/2023
Date Data Arrived at EDR: 12/13/2023
Date Made Active in Reports: 03/07/2024
Number of Days to Update: 85
Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 07/11/2023
Date Data Arrived at EDR: 10/17/2023
Date Made Active in Reports: 01/09/2024
Number of Days to Update: 84
Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 01/19/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21
Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65
Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 04/12/2023
Date Data Arrived at EDR: 05/02/2023
Date Made Active in Reports: 06/13/2023
Number of Days to Update: 42
Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 08/10/2020
Date Data Arrived at EDR: 08/12/2020
Date Made Active in Reports: 10/23/2020
Number of Days to Update: 72
Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 02/09/2024
Next Scheduled EDR Contact: 05/27/2024
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 03/22/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Semi-Annually

MENDOCINO COUNTY:

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/22/2021
Date Data Arrived at EDR: 11/18/2021
Date Made Active in Reports: 11/22/2021
Number of Days to Update: 4

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 02/20/2024
Next Scheduled EDR Contact: 06/03/2024
Data Release Frequency: Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 11/15/2023
Date Data Arrived at EDR: 11/20/2023
Date Made Active in Reports: 02/15/2024
Number of Days to Update: 87

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 02/12/2024
Next Scheduled EDR Contact: 05/27/2024
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 02/22/2021
Date Data Arrived at EDR: 03/02/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 78

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 02/16/2024
Next Scheduled EDR Contact: 06/03/2024
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 10/04/2021
Date Data Arrived at EDR: 10/06/2021
Date Made Active in Reports: 12/29/2021
Number of Days to Update: 84

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 03/22/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/16/2024
Next Scheduled EDR Contact: 06/03/2024
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/16/2024
Next Scheduled EDR Contact: 06/03/2024
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 10/31/2023
Date Data Arrived at EDR: 11/03/2023
Date Made Active in Reports: 01/23/2024
Number of Days to Update: 81

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 01/22/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 10/10/2023
Date Data Arrived at EDR: 11/01/2023
Date Made Active in Reports: 01/23/2024
Number of Days to Update: 83

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 03/13/2024
Next Scheduled EDR Contact: 05/13/2024
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 10/10/2023
Date Data Arrived at EDR: 11/01/2023
Date Made Active in Reports: 01/23/2024
Number of Days to Update: 83

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 03/13/2024
Next Scheduled EDR Contact: 05/13/2024
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 10/10/2023
Date Data Arrived at EDR: 11/01/2023
Date Made Active in Reports: 01/23/2024
Number of Days to Update: 83

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 03/13/2024
Next Scheduled EDR Contact: 05/13/2024
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 11/09/2023
Date Data Arrived at EDR: 11/09/2023
Date Made Active in Reports: 11/21/2023
Number of Days to Update: 12
Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 02/26/2024
Next Scheduled EDR Contact: 06/10/2024
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64
Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 01/04/2024
Date Data Arrived at EDR: 01/04/2024
Date Made Active in Reports: 03/29/2024
Number of Days to Update: 85
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 06/24/2024
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 01/04/2024
Date Data Arrived at EDR: 01/04/2024
Date Made Active in Reports: 03/21/2024
Number of Days to Update: 77
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/08/2024
Next Scheduled EDR Contact: 06/24/2024
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 11/07/2022
Date Data Arrived at EDR: 12/21/2022
Date Made Active in Reports: 03/16/2023
Number of Days to Update: 85
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 03/25/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 11/07/2022
Date Data Arrived at EDR: 12/09/2022
Date Made Active in Reports: 03/01/2023
Number of Days to Update: 82
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 03/25/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List
Cupa facility list

Date of Government Version: 01/17/2024
Date Data Arrived at EDR: 01/18/2024
Date Made Active in Reports: 01/26/2024
Number of Days to Update: 8

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 01/11/2024
Next Scheduled EDR Contact: 05/13/2024
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 11/08/2023
Date Data Arrived at EDR: 11/09/2023
Date Made Active in Reports: 02/07/2024
Number of Days to Update: 90

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 01/29/2024
Next Scheduled EDR Contact: 05/12/2024
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database
The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 11/27/2023
Date Data Arrived at EDR: 11/27/2023
Date Made Active in Reports: 02/16/2024
Number of Days to Update: 81

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 02/27/2024
Next Scheduled EDR Contact: 06/10/2024
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 04/04/2023
Date Data Arrived at EDR: 04/05/2023
Date Made Active in Reports: 06/27/2023
Number of Days to Update: 83

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing
A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 07/22/2021
Date Data Arrived at EDR: 10/19/2021
Date Made Active in Reports: 01/13/2022
Number of Days to Update: 86

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing
The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24
Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 02/23/2024
Next Scheduled EDR Contact: 06/10/2024
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

CUPA SAN FRANCISCO CO: CUPA Facility Listing
Cupa facilities

Date of Government Version: 10/30/2023
Date Data Arrived at EDR: 11/01/2023
Date Made Active in Reports: 01/23/2024
Number of Days to Update: 83
Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 01/29/2024
Next Scheduled EDR Contact: 05/13/2024
Data Release Frequency: Varies

LUST SAN FRANCISCO: Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10
Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 01/29/2024
Next Scheduled EDR Contact: 05/13/2024
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 10/30/2023
Date Data Arrived at EDR: 11/01/2023
Date Made Active in Reports: 01/23/2024
Number of Days to Update: 83
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 01/29/2024
Next Scheduled EDR Contact: 05/13/2024
Data Release Frequency: Quarterly

SAN FRANCISO COUNTY:

SAN FRANCISCO MAHER: Maher Ordinance Property Listing
a listing of properties that fall within a Maher Ordinance, for all of San Francisco

Date of Government Version: 01/15/2024
Date Data Arrived at EDR: 01/18/2024
Date Made Active in Reports: 04/05/2024
Number of Days to Update: 78
Source: San Francisco Planning
Telephone: 628-652-7483
Last EDR Contact: 01/18/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15
Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 03/08/2024
Next Scheduled EDR Contact: 06/24/2024
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 11/08/2023
Date Data Arrived at EDR: 11/09/2023
Date Made Active in Reports: 02/07/2024
Number of Days to Update: 90

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 02/12/2024
Next Scheduled EDR Contact: 05/27/2024
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/07/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/01/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 02/09/2024
Next Scheduled EDR Contact: 05/27/2024
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 11/07/2023
Date Data Arrived at EDR: 11/08/2023
Date Made Active in Reports: 11/16/2023
Number of Days to Update: 8

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 02/12/2024
Next Scheduled EDR Contact: 05/27/2024
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 02/16/2024
Next Scheduled EDR Contact: 06/03/2024
Data Release Frequency: No Update Planned

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 02/09/2024
Next Scheduled EDR Contact: 05/27/2024
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 02/09/2024
Next Scheduled EDR Contact: 05/27/2024
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 02/23/2024
Next Scheduled EDR Contact: 06/10/2024
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 09/15/2021
Date Data Arrived at EDR: 09/16/2021
Date Made Active in Reports: 12/09/2021
Number of Days to Update: 84

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 02/23/2024
Next Scheduled EDR Contact: 06/10/2024
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 07/02/2021
Date Data Arrived at EDR: 07/06/2021
Date Made Active in Reports: 07/14/2021
Number of Days to Update: 8

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 03/15/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 06/30/2021
Date Data Arrived at EDR: 06/30/2021
Date Made Active in Reports: 09/24/2021
Number of Days to Update: 86

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 03/15/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 02/08/2022
Date Data Arrived at EDR: 02/10/2022
Date Made Active in Reports: 05/04/2022
Number of Days to Update: 83

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 08/03/2023
Date Data Arrived at EDR: 08/24/2023
Date Made Active in Reports: 09/12/2023
Number of Days to Update: 19

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 02/26/2024
Next Scheduled EDR Contact: 06/10/2024
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 12/05/2023
Date Data Arrived at EDR: 02/01/2024
Date Made Active in Reports: 02/28/2024
Number of Days to Update: 27

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 01/29/2024
Next Scheduled EDR Contact: 05/13/2024
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 01/17/2024
Date Data Arrived at EDR: 01/18/2024
Date Made Active in Reports: 04/03/2024
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 10/07/2022
Date Data Arrived at EDR: 10/07/2022
Date Made Active in Reports: 12/21/2022
Number of Days to Update: 75

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 01/29/2024
Next Scheduled EDR Contact: 05/13/2024
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 04/12/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 12/26/2023
Date Data Arrived at EDR: 01/24/2024
Date Made Active in Reports: 04/08/2024
Number of Days to Update: 75

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 01/16/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/22/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 02/02/2024
Next Scheduled EDR Contact: 05/20/2024
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 12/26/2023
Date Data Arrived at EDR: 01/23/2024
Date Made Active in Reports: 04/09/2024
Number of Days to Update: 77

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 01/16/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 11/28/2023
Date Data Arrived at EDR: 11/29/2023
Date Made Active in Reports: 02/26/2024
Number of Days to Update: 89
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/05/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 12/18/2023
Date Data Arrived at EDR: 12/26/2023
Date Made Active in Reports: 03/19/2024
Number of Days to Update: 84
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 03/22/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 01/22/2024
Date Data Arrived at EDR: 01/23/2024
Date Made Active in Reports: 04/08/2024
Number of Days to Update: 76
Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 01/22/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Varies

**OTHER DATABASE(S)**

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 11/06/2023
Date Data Arrived at EDR: 11/07/2023
Date Made Active in Reports: 01/31/2024
Number of Days to Update: 85
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 02/06/2024
Next Scheduled EDR Contact: 05/20/2024
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36
Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 03/29/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 11/30/2023
Date Made Active in Reports: 12/01/2023
Number of Days to Update: 1

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 01/26/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/08/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/12/2024
Next Scheduled EDR Contact: 05/27/2024
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/01/2024
Next Scheduled EDR Contact: 06/17/2024
Data Release Frequency: Annually

Oil/Gas Pipelines

Source: Endeavor Business Media

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data

Source: Endeavor Business Media

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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.
Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.
Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.
Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.
Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

**STREET AND ADDRESS INFORMATION**

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# GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

**TARGET PROPERTY ADDRESS**

3200 VERDE VALLE LN
3200 VERDE VALLE LN
EL DORADO HILLS, CA 95762

**TARGET PROPERTY COORDINATES**

| | |
|---|---|
| Latitude (North): | 38.705513 - 38° 42' 19.85'' |
| Longitude (West): | 121.046332 - 121° 2' 46.80'' |
| Universal Tranverse Mercator: | Zone 10 |
| UTM X (Meters): | 669882.1 |
| UTM Y (Meters): | 4285702.0 |
| Elevation: | 1102 ft. above sea level |

**USGS TOPOGRAPHIC MAP**

| | |
|---|---|
| Target Property Map: | 50005916 CLARKSVILLE, CA |
| Version Date: | 2021 |

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**GROUNDWATER FLOW DIRECTION INFORMATION**

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

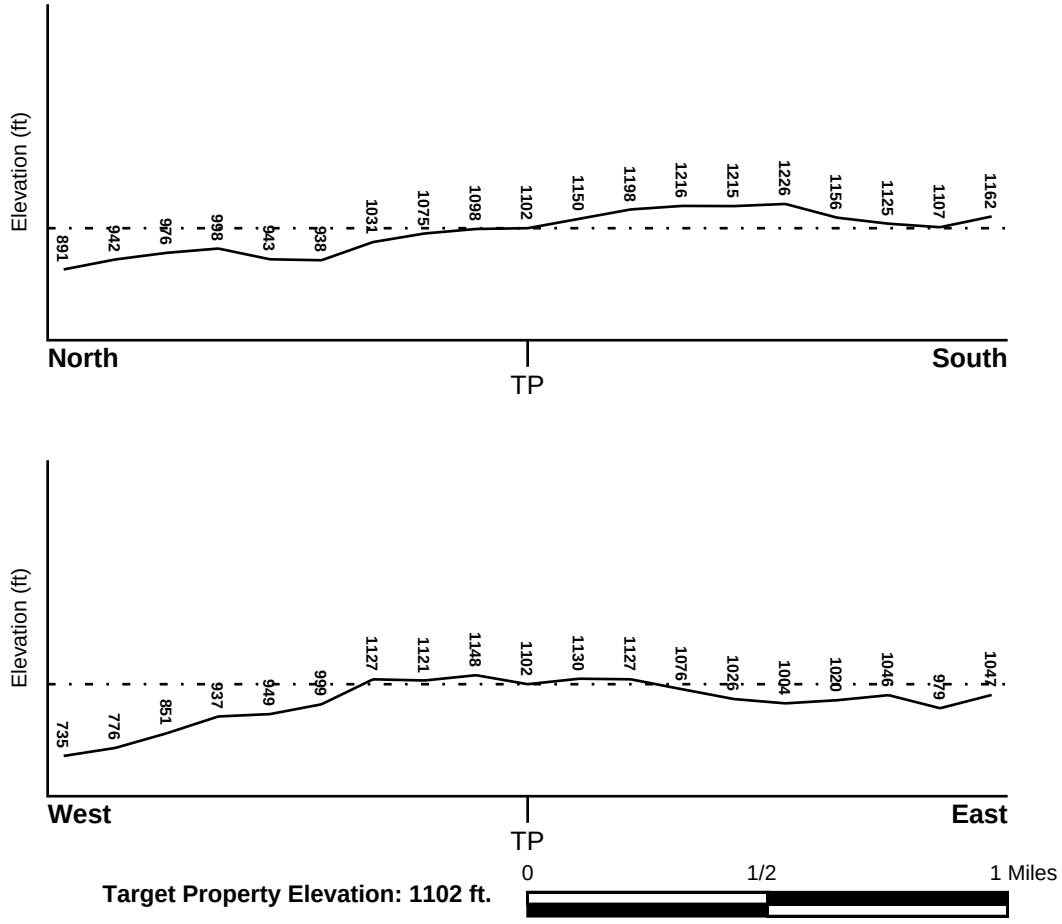
**TOPOGRAPHIC INFORMATION**

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

**TARGET PROPERTY TOPOGRAPHY**

General Topographic Gradient: General NNW

**SURROUNDING TOPOGRAPHY: ELEVATION PROFILES**




**Target Property Elevation: 1102 ft.**

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**HYDROLOGIC INFORMATION**

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

**FEMA FLOOD ZONE**

| Flood Plain Panel at Target Property | FEMA Source Type |
|---|---|
| 06017C0725E | FEMA FIRM Flood data |

| Additional Panels in search area: | FEMA Source Type |
|---|---|
| 06067C0130H | FEMA FIRM Flood data |

**NATIONAL WETLAND INVENTORY**

| NWI Quad at Target Property | NWI Electronic Data Coverage |
|---|---|
| CLARKSVILLE | YES - refer to the Overview Map and Detail Map |

**HYDROGEOLOGIC INFORMATION**

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

***Site-Specific Hydrogeological Data*:***

| | |
|---|---|
| Search Radius: | 1.25 miles |
| Status: | Not found |

**AQUIFLOW®**

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

| MAP ID | LOCATION FROM TP | GENERAL DIRECTION GROUNDWATER FLOW |
|---|---|---|
| Not Reported | | |

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**GROUNDWATER FLOW VELOCITY INFORMATION**

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

**GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY**

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

**ROCK STRATIGRAPHIC UNIT**

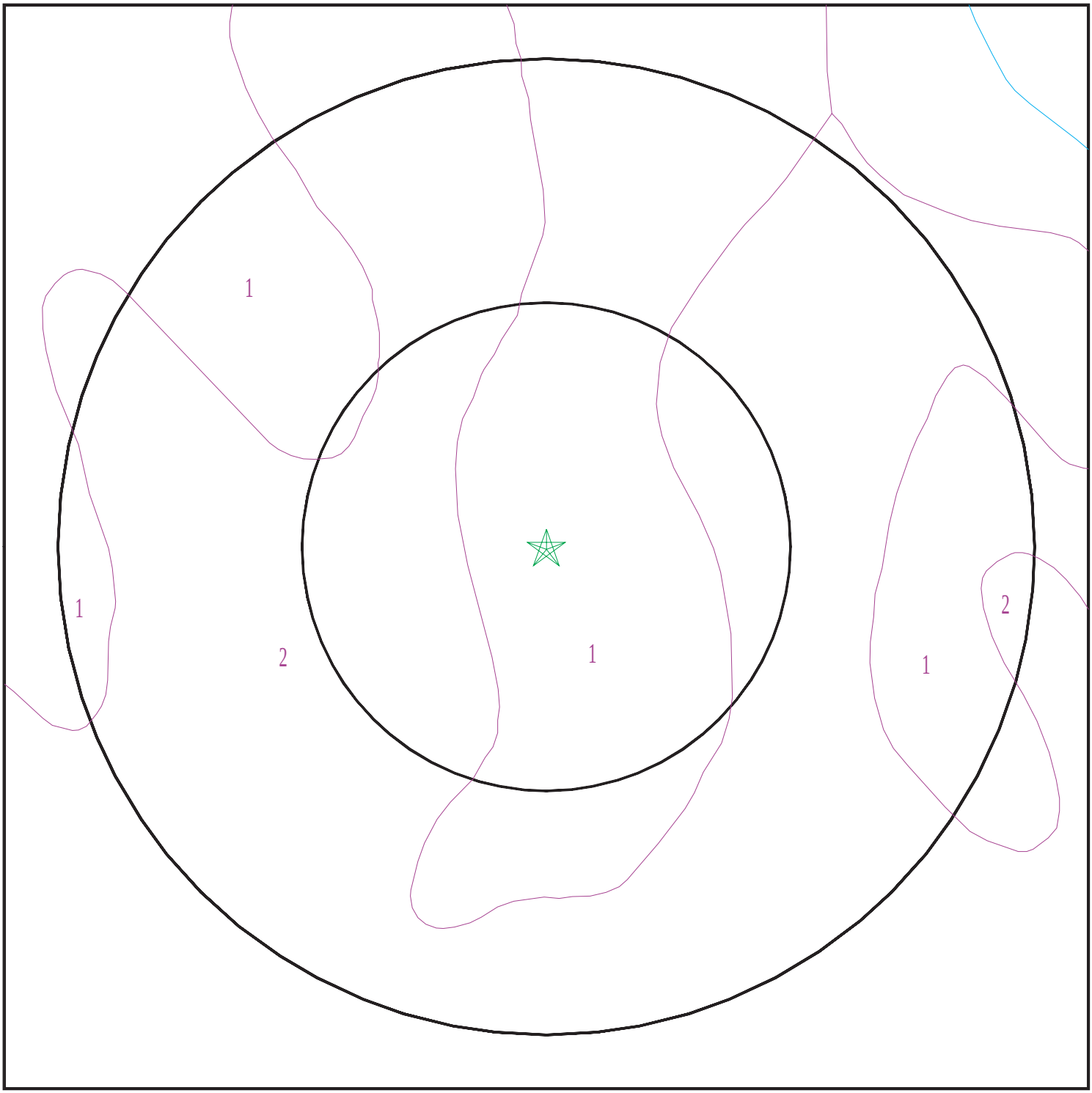
| | |
|---|---|
| Era: | Mesozoic |
| System: | Jurassic |
| Series: | Jurassic |
| Code: | Jg *(decoded above as Era, System & Series)* |

**GEOLOGIC AGE IDENTIFICATION**

Category: Jurassic granitic rocks

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

# SSURGO SOIL MAP - 7624776.2s




Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

| | | | |
|---|---|---|---|
| SITE NAME: | 3200 VERDE VALLE LN | CLIENT: | Terraphase Engineering Inc. |
| ADDRESS: | 3200 VERDE VALLE LN<br>EL DORADO HILLS CA 95762 | CONTACT: | Hallie Douglas |
| LAT/LONG: | 38.705513 / 121.046332 | INQUIRY #: | 7624776.2s |
| | | DATE: | April 15, 2024 7:28 pm |

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# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY**

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

---

**Soil Map ID: 1**

Soil Component Name: AUBURN

Soil Surface Texture: silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 48 inches

Depth to Watertable Min: > 0 inches

| Soil Layer Information | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Boundary | | | Classification | | Saturated hydraulic conductivity micro m/sec | Soil Reaction (pH) |
| Layer | Upper | Lower | Soil Texture Class | AASHTO Group | Unified Soil | | |
| 1 | 0 inches | 14 inches | silt loam | Not reported | Not reported | Max:<br>Min: | Max: Min: |
| 2 | 14 inches | 18 inches | unweathered bedrock | Not reported | Not reported | Max:<br>Min: | Max: Min: |

---

**Soil Map ID: 2**

Soil Component Name: AUBURN

Soil Surface Texture: silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 48 inches

Depth to Watertable Min: > 0 inches

| Soil Layer Information | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Boundary | | | Classification | | Saturated hydraulic conductivity micro m/sec | Soil Reaction (pH) |
| Layer | Upper | Lower | Soil Texture Class | AASHTO Group | Unified Soil | | |
| 1 | 0 inches | 14 inches | silt loam | Not reported | Not reported | Max:<br>Min: | Max: Min: |
| 2 | 14 inches | 18 inches | unweathered bedrock | Not reported | Not reported | Max:<br>Min: | Max: Min: |

**LOCAL / REGIONAL WATER AGENCY RECORDS**

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

**WELL SEARCH DISTANCE INFORMATION**

| DATABASE | SEARCH DISTANCE (miles) |
|---|---|
| Federal USGS | 1.000 |
| Federal FRDS PWS | Nearest PWS within 1 mile |
| State Database | 1.000 |

**FEDERAL USGS WELL INFORMATION**

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| No Wells Found | | |

**FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION**

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| No PWS System Found | | |

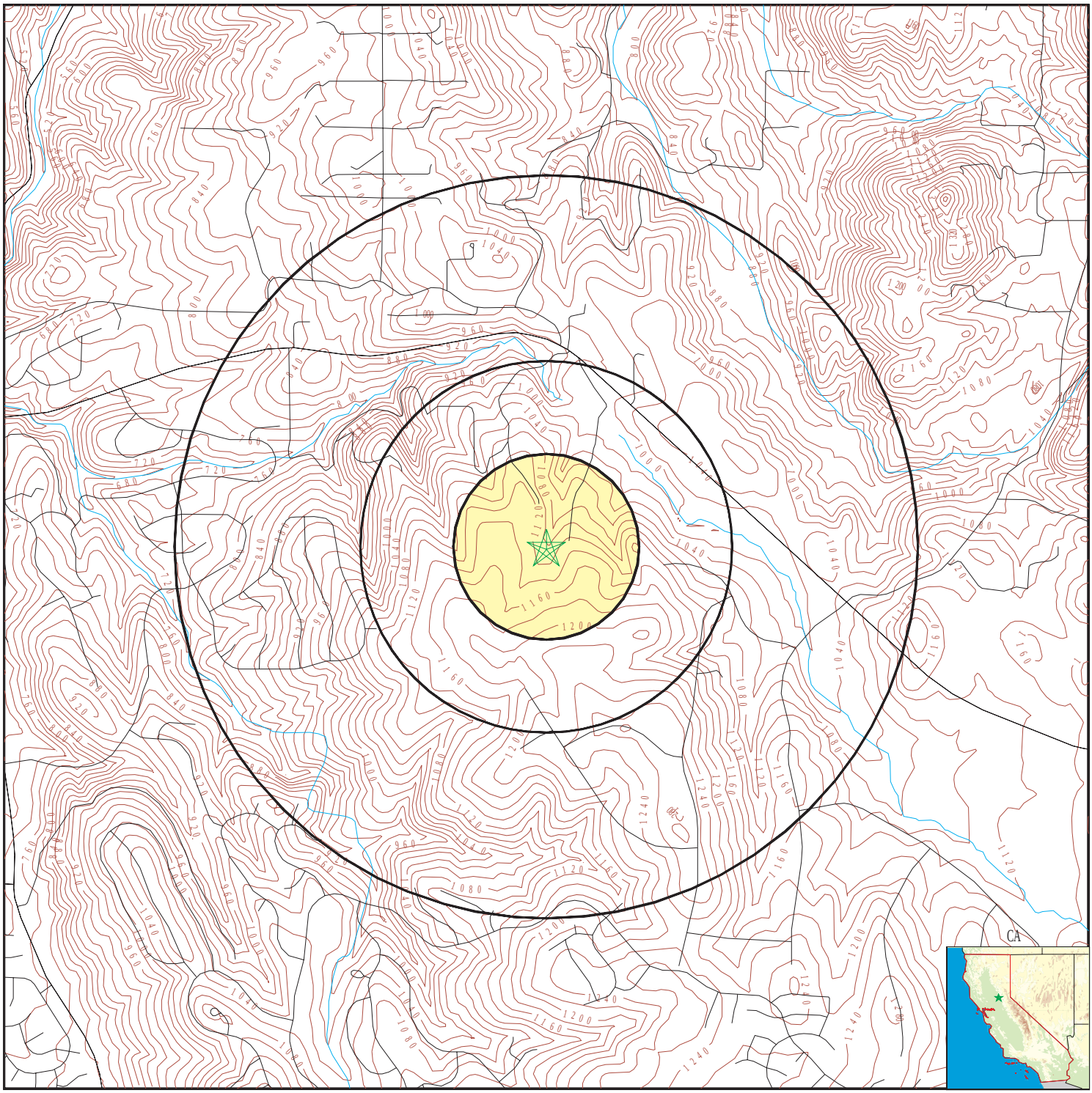
Note: PWS System location is not always the same as well location.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**STATE DATABASE WELL INFORMATION**

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| No Wells Found | | |

# PHYSICAL SETTING SOURCE MAP - 7624776.2s




- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

| | | | |
|---|---|---|---|
| SITE NAME: | 3200 VERDE VALLE LN | CLIENT: | Terraphase Engineering Inc. |
| ADDRESS: | 3200 VERDE VALLE LN<br>EL DORADO HILLS CA 95762 | CONTACT: | Hallie Douglas |
| | | INQUIRY #: | 7624776.2s |
| LAT/LONG: | 38.705513 / 121.046332 | DATE: | April 15, 2024 7:28 pm |

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# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
# RADON

**AREA RADON INFORMATION**

State Database: CA Radon

Radon Test Results

| Zipcode | Num Tests | > 4 pCi/L |
|---|---|---|
| 95762 | 31 | 3 |

Federal EPA Radon Zone for EL DORADO County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

---

Federal Area Radon Information for EL DORADO COUNTY, CA

Number of sites tested: 27

| Area | Average Activity | % <4 pCi/L | % 4-20 pCi/L | % >20 pCi/L |
|---|---|---|---|---|
| Living Area - 1st Floor | 0.844 pCi/L | 100% | 0% | 0% |
| Living Area - 2nd Floor | Not Reported | Not Reported | Not Reported | Not Reported |
| Basement | 3.400 pCi/L | 50% | 50% | 0% |

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

## HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

## HYDROGEOLOGIC INFORMATION

AQUIFLOW$^{R}$ Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

## GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

## OTHER STATE DATABASE INFORMATION

Groundwater Ambient Monitoring & Assessment Program
State Water Resources Control Board
Telephone: 916-341-5577
The GAMA Program is Californias comprehensive groundwater quality monitoring program. GAMA collects data by testing the untreated, raw water in different types of wells for naturally-occurring and man-made chemicals. The GAMA data includes Domestic, Monitoring and Municipal well types from the following sources, Department of Water Resources, Department of Heath Services, EDF, Agricultural Lands, Lawrence Livermore National Laboratory, Department of Pesticide Regulation, United States Geological Survey, Groundwater Ambient Monitoring and Assessment Program and Local Groundwater Projects.

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

Geothermal Wells Listing
Department of Conservation
Telephone: 916-445-9686
Geothermal well means a well constructed to extract or return water to the ground after it has been used for heating or cooling purposes. Geothermal wells in California (except for wells on federal leases which are administered by the Bureau of Land Management) are permitted, drilled, operated, and permanently sealed and closed (plugged and abandoned) under requirements and procedures administered by the Geothermal Section of the Department of Conservations Geologic Energy Management Division (CalGEM, formerly DOGGR).

California Oil and Gas Well Locations
Source: Dept of Conservation, Geologic Energy Management Division
Telephone: 916-323-1779
Oil and Gas well locations in the state.

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

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# Appendix C

## Historical Aerial Photographs

**3200 VERDE VALLE LN**

3200 VERDE VALLE LN

EL DORADO HILLS, CA 95762

Inquiry Number: 7624776.8

April 16, 2024

# The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# EDR Aerial Photo Decade Package

04/16/24

**Site Name:**

3200 VERDE VALLE LN
3200 VERDE VALLE LN
EL DORADO HILLS, CA 95762
EDR Inquiry # 7624776.8

**Client Name:**

Terraphase Engineering Inc.
1300 Clay Street Suite 1000
Oakland, CA 94612
Contact: Hallie Douglas

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

***Search Results:***

| *Year* | *Scale* | *Details* | *Source* |
|---|---|---|---|
| 2020 | 1"=750' | Flight Year: 2020 | USDA/NAIP |
| 2016 | 1"=750' | Flight Year: 2016 | USDA/NAIP |
| 2012 | 1"=750' | Flight Year: 2012 | USDA/NAIP |
| 2009 | 1"=750' | Flight Year: 2009 | USDA/NAIP |
| 2006 | 1"=750' | Flight Year: 2006 | USDA/NAIP |
| 1993 | 1"=750' | Acquisition Date: May 09, 1993 | USGS/DOQQ |
| 1984 | 1"=750' | Flight Date: June 29, 1984 | USDA |
| 1972 | 1"=750' | Flight Date: June 28, 1972 | USDA |
| 1966 | 1"=750' | Flight Date: August 04, 1966 | USGS |
| 1962 | 1"=750' | Flight Date: July 29, 1962 | USDA |
| 1952 | 1"=750' | Flight Date: July 24, 1952 | USGS |
| 1940 | 1"=750' | Flight Date: June 30, 1940 | USDA |

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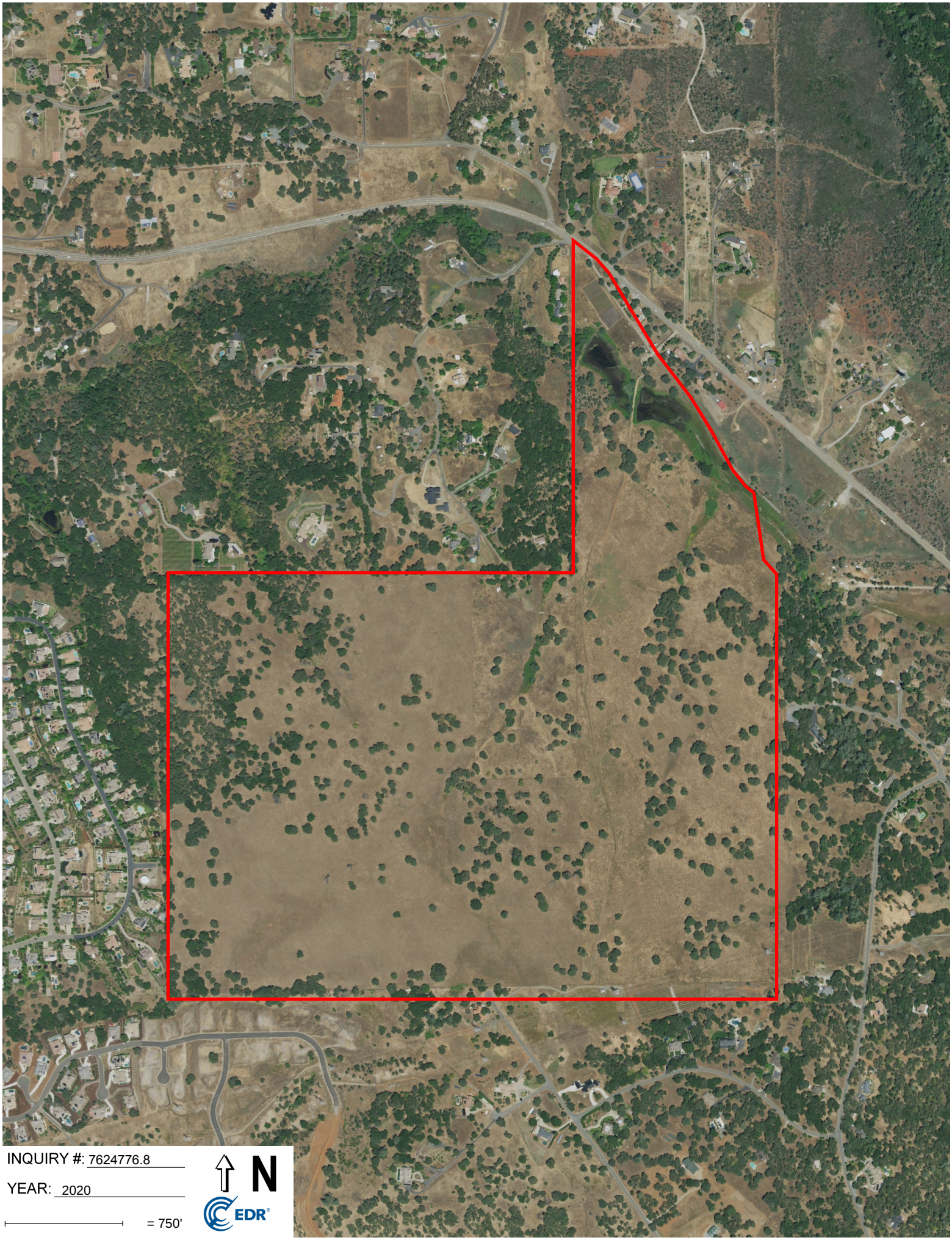
INQUIRY #: 7624776.8
YEAR: 2020
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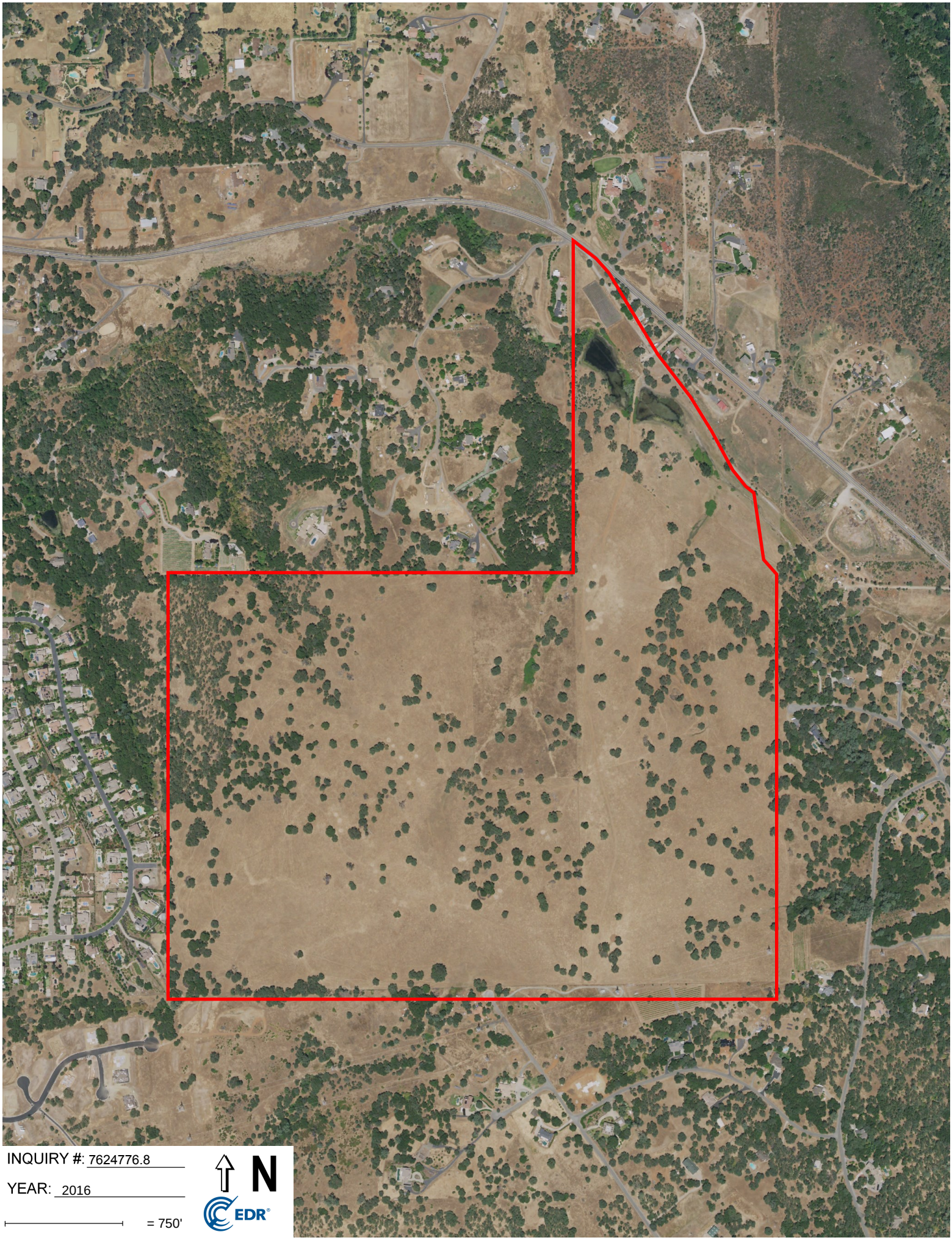
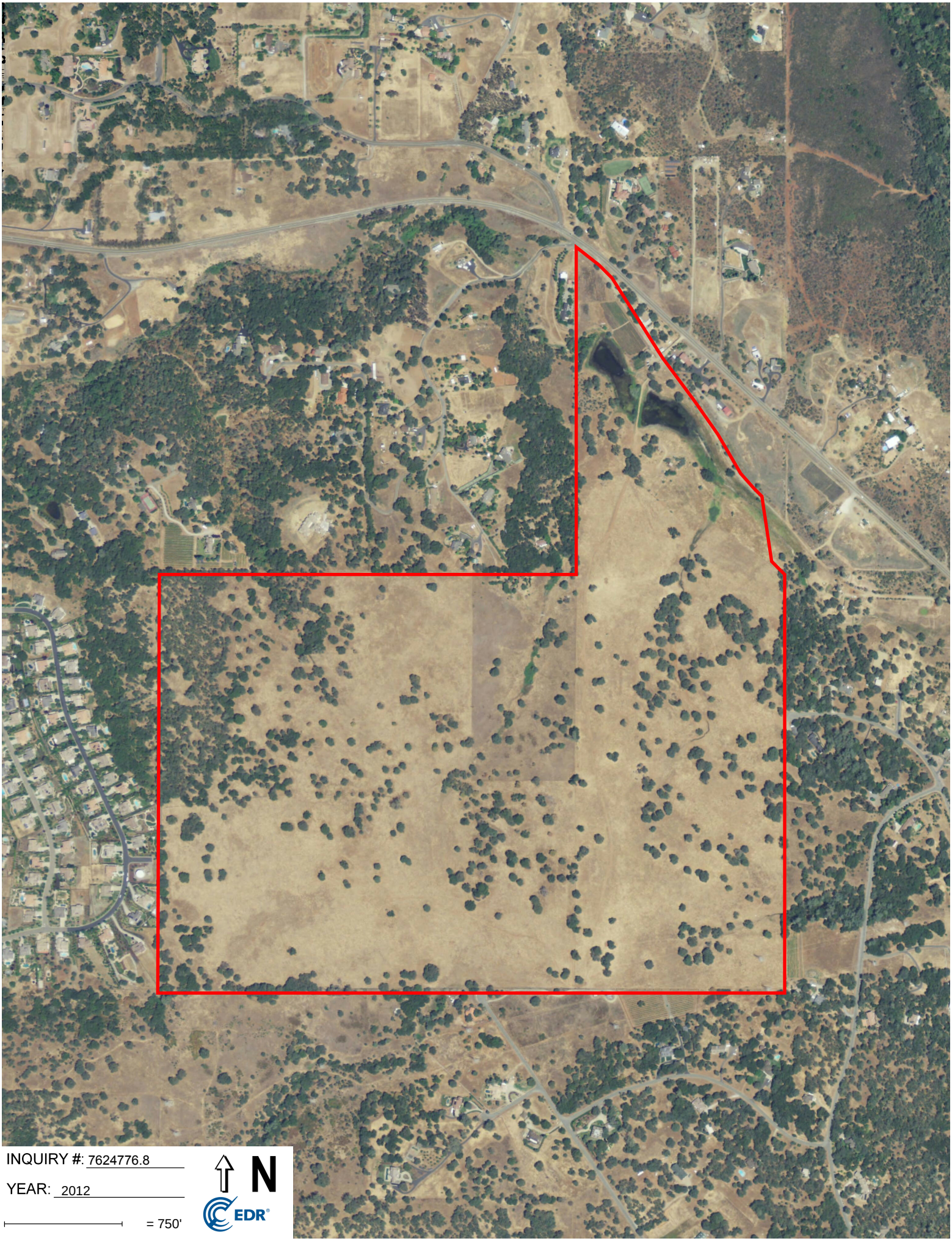
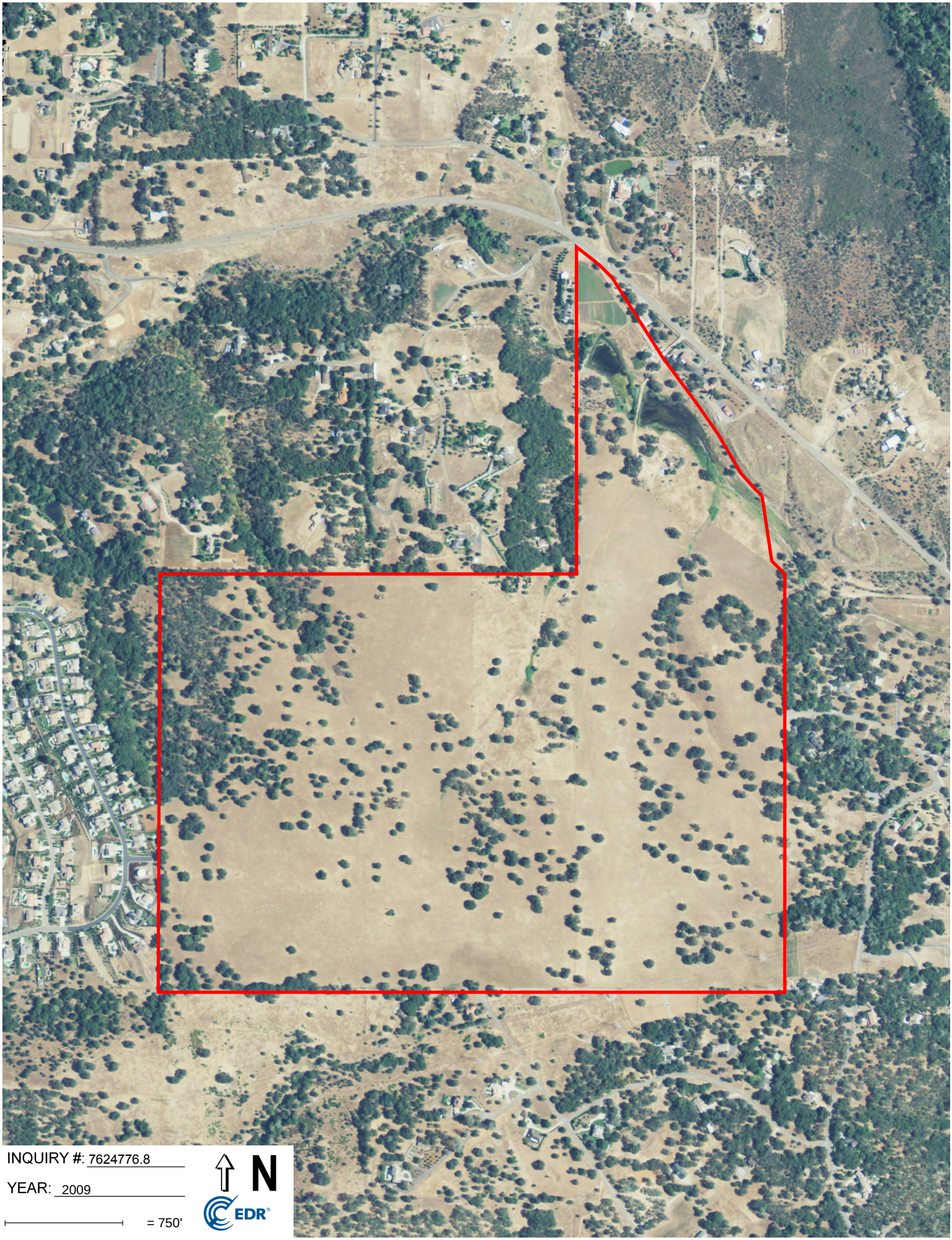
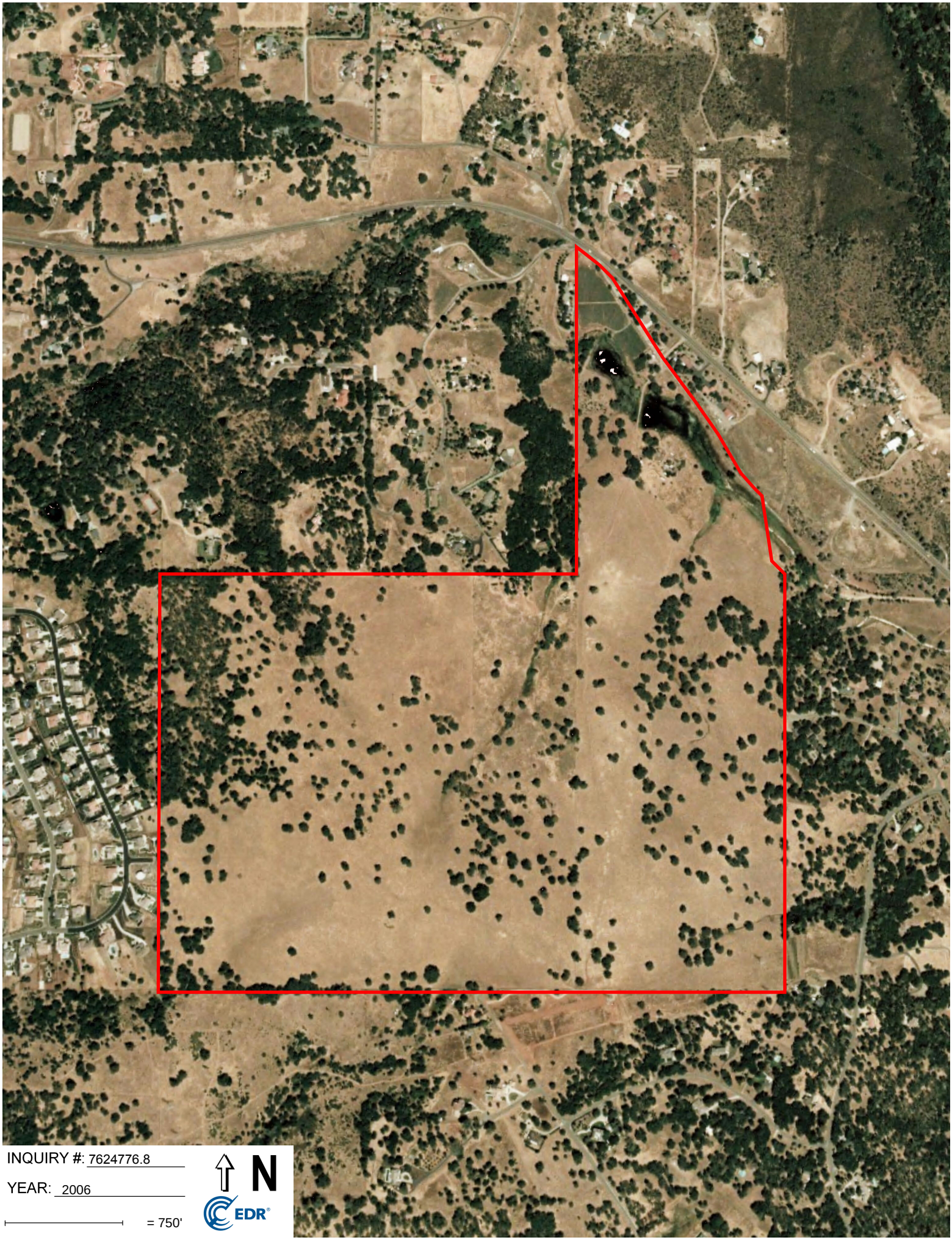
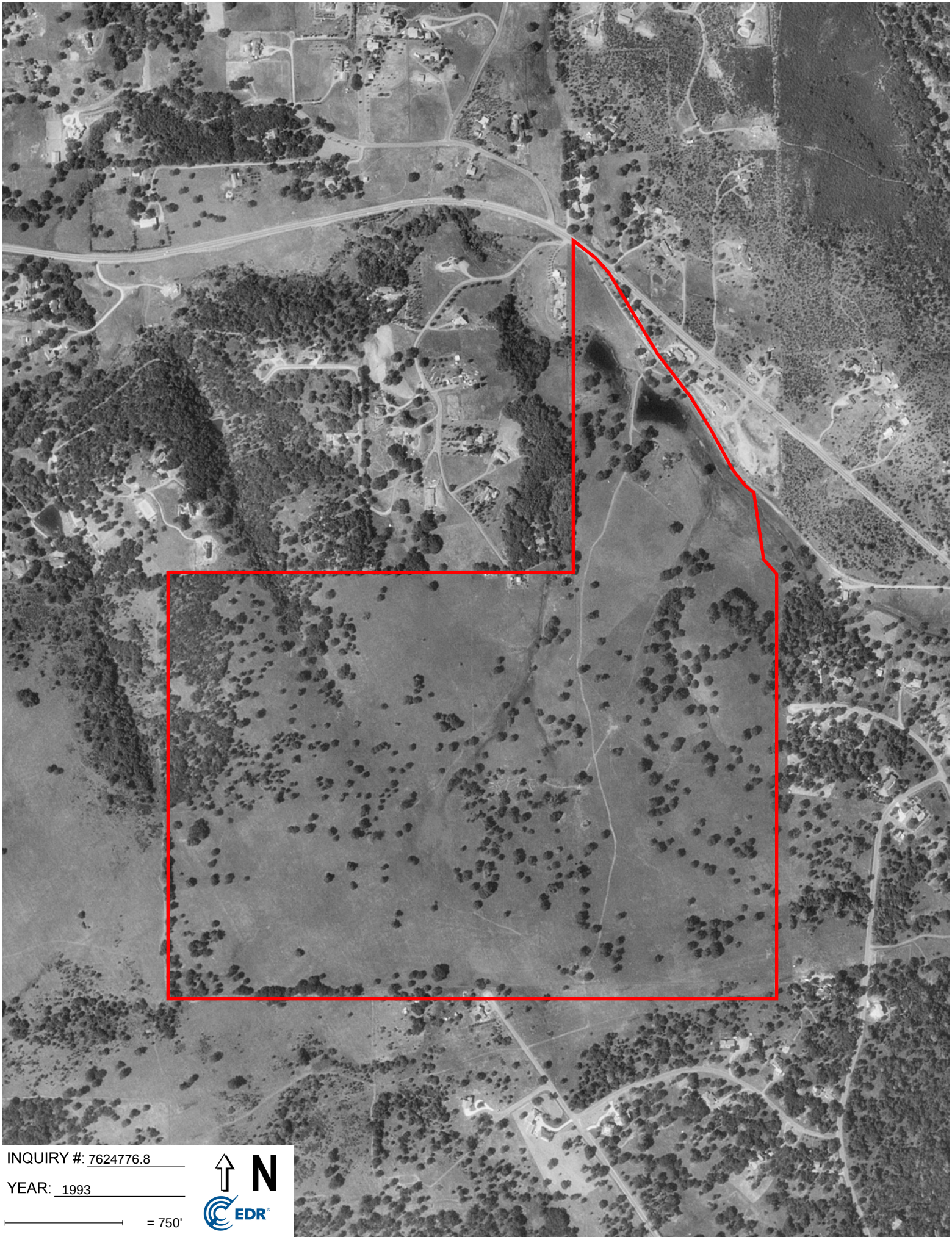
N
EDR


INQUIRY #: 7624776.8
YEAR: 2016
= 750'
N
EDR


INQUIRY #: 7624776.8
YEAR: 2012
= 750'
N
EDR


INQUIRY #: 7624776.8
YEAR: 2009
= 750'
N
EDR


INQUIRY #: 7624776.8
YEAR: 2006
= 750'
N
EDR



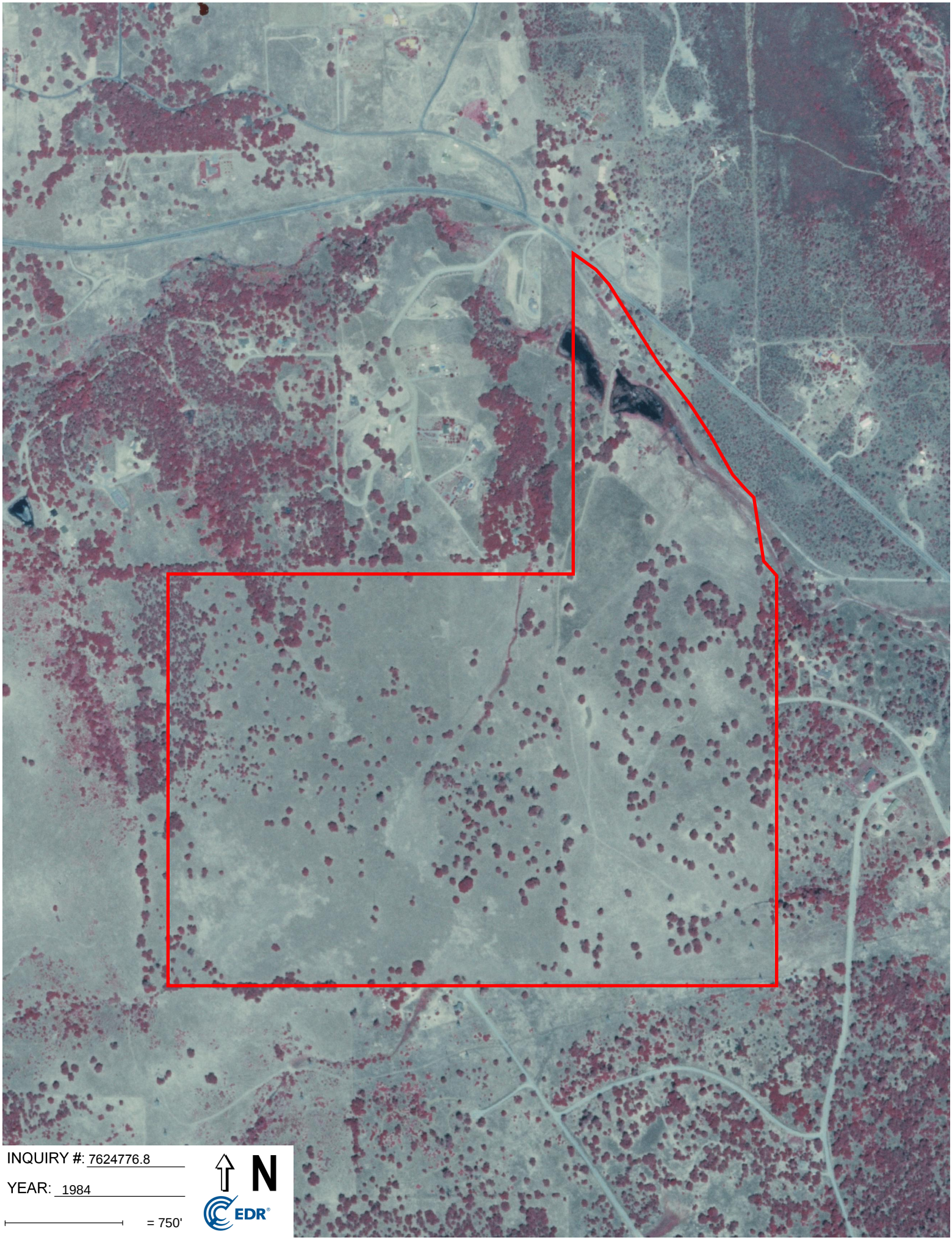
INQUIRY #: 7624776.8

YEAR: 1993

= 750'

N

EDR


INQUIRY #: 7624776.8
YEAR: 1984
= 750'
N
EDR



INQUIRY #: 7624776.8

YEAR: 1972

= 750'

N

EDR


INQUIRY #: 7624776.8
YEAR: 1966
= 750'
N
EDR



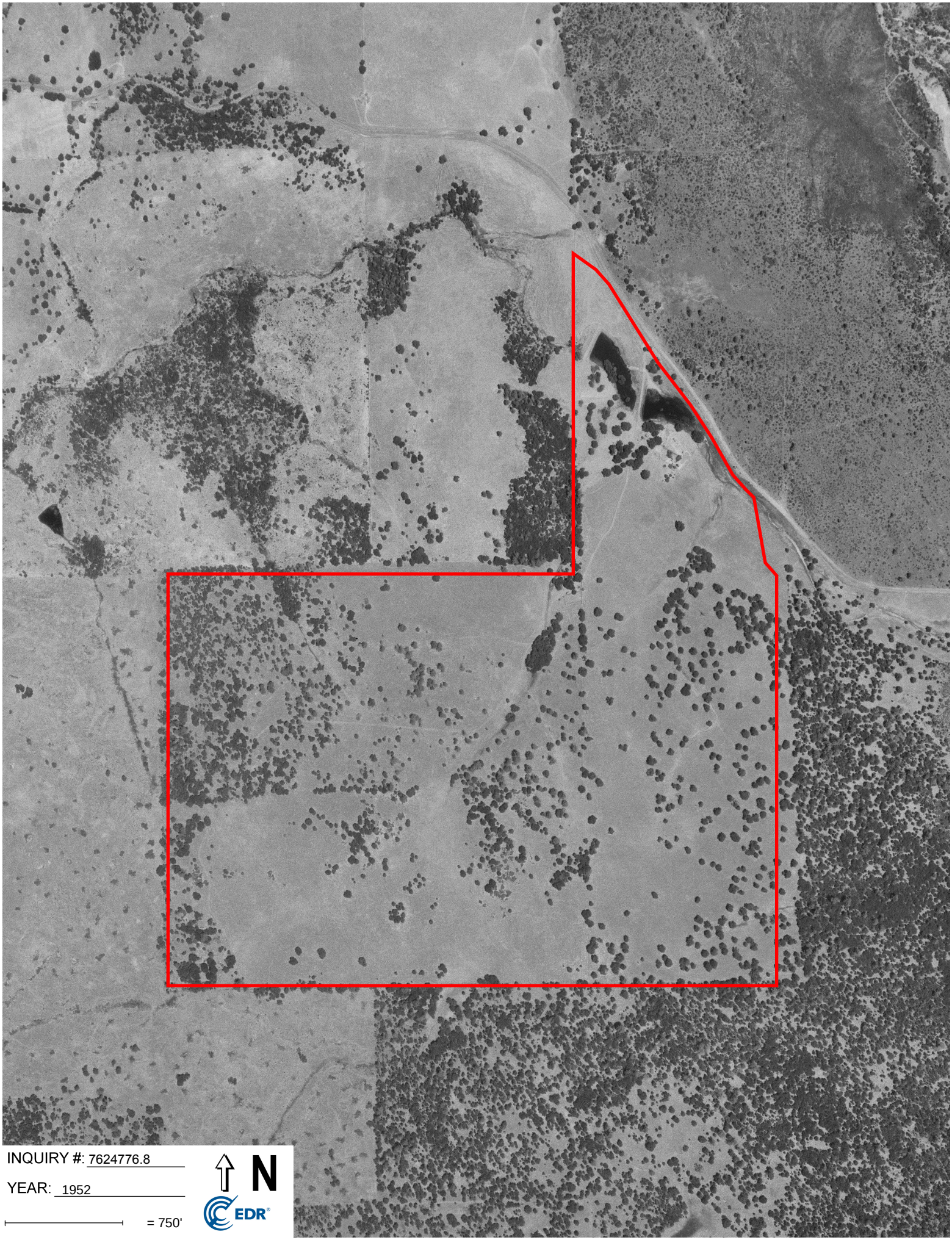
INQUIRY #: 7624776.8

YEAR: 1962

= 750'

N

EDR



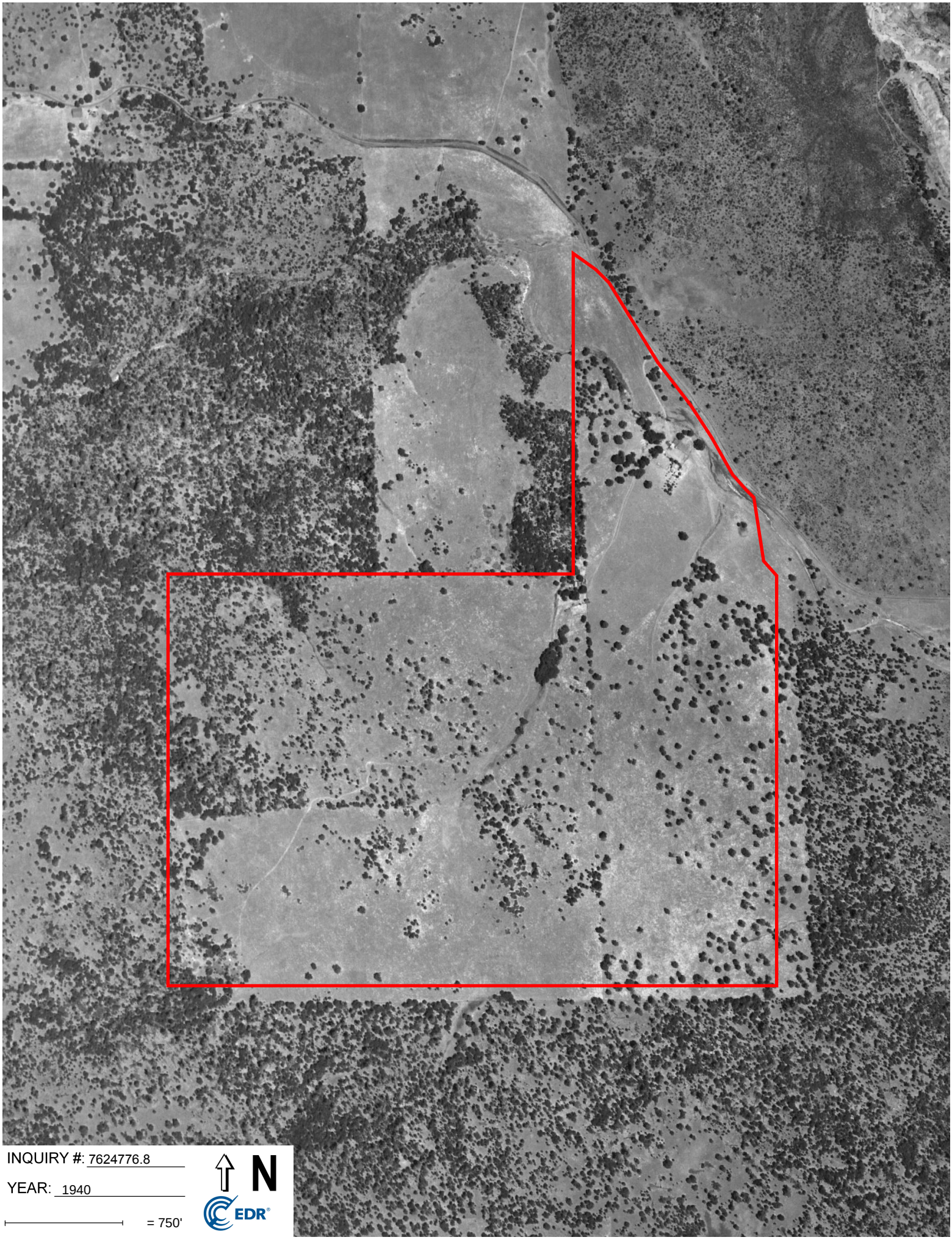
INQUIRY #: 7624776.8

YEAR: 1952

= 750'

N

EDR



INQUIRY #: 7624776.8

YEAR: 1940

= 750'

N

EDR

# Appendix D

## Sanborn® Fire Insurance Certificate of No Coverage

3200 VERDE VALLE LN

3200 VERDE VALLE LN

EL DORADO HILLS, CA 95762

Inquiry Number: 7624776.3

April 15, 2024

# Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# Certified Sanborn® Map Report

04/15/24

**Site Name:**

3200 VERDE VALLE LN
3200 VERDE VALLE LN
EL DORADO HILLS, CA 95762
EDR Inquiry # 7624776.3

**Client Name:**

Terraphase Engineering Inc.
1300 Clay Street Suite 1000
Oakland, CA 94612
Contact: Hallie Douglas

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Terraphase Engineering Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

## *Certified Sanborn Results:*

**Certification #** DED7-4E81-B0D5

**PO #** C077.001.001

**Project** TK Consulting

### UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: DED7-4E81-B0D5

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

*The Sanborn Library LLC Since 1866™*

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# Appendix E

## City Directories

**3200 VERDE VALLE LN**
3200 VERDE VALLE LN
EL DORADO HILLS, CA 95762

Inquiry Number: 7624776.5
April 24, 2024

# The EDR-City Directory Image Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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**Executive Summary**

**Findings**

**City Directory Images**

***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.

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# EXECUTIVE SUMMARY

## DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available business directory data at approximately five year intervals.

## RECORD SOURCES

The EDR City Directory Report accesses a variety of business directory sources, including Haines, InfoUSA, Polk, Cole, Bresser, and Stewart. Listings marked as EDR Digital Archive access Cole and InfoUSA records. The various directory sources enhance and complement each other to provide a more thorough and accurate report.

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## RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

| *Year* | *Target Street* | *Cross Street* | *Source* |
|---|---|---|---|
| 2020 | ☑ | ☑ | EDR Digital Archive |
| 2017 | ☑ | ☑ | Cole Information |
| 2014 | ☑ | ☑ | Cole Information |
| 2010 | ☑ | ☑ | Cole Information |
| 2005 | ☑ | ☑ | Cole Information |
| 2000 | ☑ | ☑ | Cole Information |
| 1995 | ☑ | ☑ | Cole Information |
| 1992 | ☑ | ☑ | Cole Information |
| 1990 | ☐ | ☑ | Haines Criss-Cross Directory |
| 1986 | ☐ | ☑ | Haines Criss-Cross Directory |
| 1981 | ☐ | ☑ | Haines Criss-Cross Directory |
| 1977 | ☐ | ☐ | Haines Criss-Cross Directory |
| 1971 | ☐ | ☐ | Haines Criss-Cross Directory |

# FINDINGS

## TARGET PROPERTY STREET

3200 VERDE VALLE LN
EL DORADO HILLS, CA 95762

| *Year* | *CD Image* | *Source* | |
|---|---|---|---|

## VERDE VALLE LN

| | | | |
|---|---|---|---|
| 2020 | pg A9 | EDR Digital Archive | |
| 2017 | pg A16 | Cole Information | |
| 2014 | pg A23 | Cole Information | |
| 2010 | pg A30 | Cole Information | |
| 2005 | pg A37 | Cole Information | |
| 2000 | pg A42 | Cole Information | |
| 1992 | pg A50 | Cole Information | |
| 1990 | - | Haines Criss-Cross Directory | Street not listed in Source |
| 1986 | - | Haines Criss-Cross Directory | Street not listed in Source |
| 1981 | - | Haines Criss-Cross Directory | Street not listed in Source |
| 1977 | - | Haines Criss-Cross Directory | Street not listed in Source |
| 1971 | - | Haines Criss-Cross Directory | Street not listed in Source |

## VERDE VLY LN

| | | | |
|---|---|---|---|
| 1995 | pg A46 | Cole Information | |

# FINDINGS

## CROSS STREETS

| *Year* | *CD Image* | *Source* | |
|---|---|---|---|
| **ABERDEEN LN** | | | |
| 2020 | pg. A2 | EDR Digital Archive | |
| 2017 | pg. A11 | Cole Information | |
| 2014 | pg. A18 | Cole Information | |
| 2010 | pg. A25 | Cole Information | |
| 2005 | pg. A32 | Cole Information | |
| 2000 | - | Cole Information | Street not listed in Source |
| 1995 | - | Cole Information | Street not listed in Source |
| 1992 | - | Cole Information | Street not listed in Source |
| 1990 | - | Haines Criss-Cross Directory | Street not listed in Source |
| 1986 | - | Haines Criss-Cross Directory | Street not listed in Source |
| 1981 | - | Haines Criss-Cross Directory | Street not listed in Source |
| 1977 | - | Haines Criss-Cross Directory | Street not listed in Source |
| 1971 | - | Haines Criss-Cross Directory | Street not listed in Source |
| **E GREEN SPRINGS RD** | | | |
| 2020 | pg. A6 | EDR Digital Archive | |
| 2017 | pg. A13 | Cole Information | |
| 2014 | pg. A20 | Cole Information | |
| 2010 | pg. A27 | Cole Information | |
| 2005 | pg. A34 | Cole Information | |
| 2000 | - | Cole Information | Street not listed in Source |
| 1995 | - | Cole Information | Street not listed in Source |
| 1992 | - | Cole Information | Street not listed in Source |
| 1990 | - | Haines Criss-Cross Directory | Street not listed in Source |
| 1986 | - | Haines Criss-Cross Directory | Street not listed in Source |
| 1981 | - | Haines Criss-Cross Directory | Street not listed in Source |
| 1977 | - | Haines Criss-Cross Directory | Street not listed in Source |
| 1971 | - | Haines Criss-Cross Directory | Street not listed in Source |

# FINDINGS

| *Year* | *CD Image* | *Source* | |
|---|---|---|---|
| **GREEN SPRINGS RD** | | | |
| 2000 | pg. A39 | Cole Information | |
| 1995 | pg. A43 | Cole Information | |
| 1992 | pg. A47 | Cole Information | |
| **GREEN VALLEY RD** | | | |
| 2020 | pg. A7 | EDR Digital Archive | |
| 2017 | pg. A14 | Cole Information | |
| 2014 | pg. A21 | Cole Information | |
| 2010 | pg. A28 | Cole Information | |
| 2005 | pg. A35 | Cole Information | |
| 2000 | pg. A40 | Cole Information | |
| 1995 | pg. A44 | Cole Information | |
| 1992 | pg. A48 | Cole Information | |
| 1990 | - | Haines Criss-Cross Directory | Street not listed in Source |
| 1986 | - | Haines Criss-Cross Directory | Street not listed in Source |
| 1981 | - | Haines Criss-Cross Directory | Street not listed in Source |
| 1977 | - | Haines Criss-Cross Directory | Street not listed in Source |
| 1971 | - | Haines Criss-Cross Directory | Street not listed in Source |
| **MARDEN DR** | | | |
| 2020 | pg. A8 | EDR Digital Archive | |
| 2017 | pg. A15 | Cole Information | |
| 2014 | pg. A22 | Cole Information | |
| 2010 | pg. A29 | Cole Information | |
| 2005 | pg. A36 | Cole Information | |
| 2000 | pg. A41 | Cole Information | |
| 1995 | pg. A45 | Cole Information | |
| 1992 | pg. A49 | Cole Information | |
| 1990 | pg. A51 | Haines Criss-Cross Directory | |
| 1986 | pg. A52 | Haines Criss-Cross Directory | |
| 1981 | pg. A53 | Haines Criss-Cross Directory | |

# FINDINGS

| Year | CD Image | Source | |
|---|---|---|---|
| 1977 | - | Haines Criss-Cross Directory | Street not listed in Source |
| 1971 | - | Haines Criss-Cross Directory | Street not listed in Source |

**W GREEN SPRINGS RD**

| | | | |
|---|---|---|---|
| 2020 | pg. A10 | EDR Digital Archive | |
| 2017 | pg. A17 | Cole Information | |
| 2014 | pg. A24 | Cole Information | |
| 2010 | pg. A31 | Cole Information | |
| 2005 | pg. A38 | Cole Information | |
| 1990 | - | Haines Criss-Cross Directory | Street not listed in Source |
| 1986 | - | Haines Criss-Cross Directory | Street not listed in Source |
| 1981 | - | Haines Criss-Cross Directory | Street not listed in Source |
| 1977 | - | Haines Criss-Cross Directory | Street not listed in Source |
| 1971 | - | Haines Criss-Cross Directory | Street not listed in Source |

# City Directory Images

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | EDR Digital Archive |

# ABERDEEN LN 2020

| | |
|---|---|
| 2665 | GEORGE SEMKIW |
| | JONATHAN SEMKIW |
| | KAREN SEMKIW |
| 2668 | CAMERON CESPEDES |
| | CONNIE YEE |
| | NANCY YEE |
| | SAMUEL CESPEDES |
| 2670 | CHIOU LIH |
| | CYNTHIA YOUNG |
| | JENKUAN YOUNG |
| | LIH-CHIOU YOUNG |
| 2679 | JEFFREY LAMSON |
| | LISA LAMSON |
| 2680 | DANIEL MONTGOMERY |
| | DAWNELLE MONTGOMERY |
| | WENDY MONTGOMERY |
| 2688 | ARBIN KUMAR |
| 2696 | ROBERT MORALES |
| 2704 | AMI TYAGI |
| | MADHULIKA TYAGI |
| 2712 | BEVERLY WALKER |
| | MARK TANNER |
| 2715 | AL GUEVARA |
| | SONYA LEE |
| 2722 | CLAIRE DERKSEN |
| | GRACE DERKSEN |
| | HELEN DERKSEN |
| | NATALIE DERKSEN |
| | SCOTT DERKSEN |
| 2730 | ELLENE SIM |
| | ENOCH SIM |
| | JUSTIN BRUNS |
| 2740 | MILAGRO REEVES |
| | STEPHEN REEVES |
| 2752 | DEBORAH TERRILL |
| | STEVEN GRIMM |
| 2761 | ERON STEPHANIE |
| 2762 | MARY MORRIS |
| | RICHARD ANDERSON |
| 2770 | CESAR DE OCA |
| | CESAR MONTESDEOCA |
| | MEGAN DE OCA |
| | MEGAN MONTESDEOCA |
| 2776 | BYAS NAMBISAN |
| | IRENE MANNING |
| | TOM SALCIDO |
| 2781 | JASON GOLDMAN |
| 2782 | BRIAN HOSS |
| | DEBRA HOSS |
| | WAYNE HOSS |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | EDR Digital Archive |

## ABERDEEN LN 2020 (Cont'd)

| | |
|---|---|
| 2790 | ANGIE BRYAN |
| 2795 | HANH TRAN |
| | TOAN BUI |
| 2809 | DAVID COMSTOCK |
| | SUSAN COMSTOCK |
| 2810 | WINNIE SETO |
| 2820 | A BHATTACHARYA |
| | ANIRBAN BHATTACHARYA |
| | TR BHATTACHARYA |
| 2821 | DEEANNE RILEY |
| | JAY RILEY |
| | KORI RILEY |
| 2830 | HEIDI MAUNDER |
| | PAUL MAUNDER |
| 2838 | HEATHER PRATT |
| | JONATHAN PRATT |
| 2845 | JAMES CHI |
| | JAMES JEN |
| | JUDY JEN |
| 2846 | DIANE HAYNES |
| | ROBERT HAYNES |
| 2857 | BRETT JOHNSON |
| | MEGAN JOHNSON |
| | MICHAEL JOHNSON |
| 2858 | CHERYL GROB |
| | LINDSAY GROB |
| | RITA GROB |
| | WALTER GROB |
| 2864 | CORIN LUCAS |
| | SETH LUCAS |
| 2865 | ADAM AGUSTIN |
| | JENNIFER AGUSTIN |
| | ROGER AGUSTIN |
| | SKYE AGUSTIN |
| 2872 | MAYA ALEXIS |
| | RANJEET ALEXIS |
| 2873 | CYNTHIA ROMATZ |
| | DANIEL CRIPPEN |
| | DAVID CRIPPEN |
| | MICHAEL CRIPPEN |
| | SANDRA CRIPPEN |
| | STEVE ROMATZ |
| 2884 | KENNETH CLAWSON |
| | LACRISHA BENNETT |
| 2885 | HASSAN MASHHADIALIREZA |
| | LORI MASHHADIALIREZA |
| 2892 | ANDRENE POTTS |
| | CHAD MIDDLETON |
| | DIANA FREDERICK |
| | GREGORY MIDDLETON |

## ABERDEEN LN 2020 (Cont'd)

| | |
| --- | --- |
| 2892 | JEFFREY POTTS |
| | JOYCE LIPPE |
| | RICHARD MIDDLETON |
| 2893 | RICHARD SCOTT |
| 2900 | BENJAMIN BRANDON |
| | NICOLAS BRANDON |
| | SALLY BRANDON |
| | SARAH BRANDON |
| 2901 | BILLY HUPP |
| | ROSALIE HAGGE |
| | ROSALIE ZIMMERMAN |
| 2908 | TRACY DUNCAN |
| 2911 | DENNIS BREEDEN |
| | MEDEIROS SONDRA |
| | SONDRA BREEDEN |
| 2916 | ERIN CHAMPION |
| 2921 | JAMES WILLIAMS |
| | ROSALIE WILLIAMS |
| | SPENCER WILLIAMS |
| 2924 | GLORIA WESTERMAN |
| | STEVEN WESTERMAN |
| 2932 | ALEKSEY MARKOV |
| | ELENA PASHINA |
| 2937 | BETTA LYONS |
| | JASON LYONS |
| | MICHAEL LYONS |
| 2950 | SONOMA JENSEN |
| 2970 | ALEXI TYLOR |
| | RICHARD BOARMAN |
| 2971 | LINDSAY JONES |
| 2981 | ASHLEY SIANEZ |
| | FRANK SIANEZ |
| | NANCY SIANEZ |
| 2982 | FINANCIAL LITERACY FOR YOU |
| | NISHA VARSHNEY |
| | SANJAY VARSHNEY |
| 2988 | LEE-ANN IKEMOTO |
| | MICHAEL IKEMOTO |
| 3004 | ANGELO SETO |
| | ELLEN SETO |
| | MARIANA SETO |
| | PEARL SETO |
| 3005 | ANGELINE SHEETS |
| | ARLENE POERIO |
| | MICHAEL SHEETS |
| | VALERIE POERIO |
| 3012 | CHRIS SPAUR |
| | DAVID SPAUR |
| | KATIE SPAUR |
| | PHILLIP SPAUR |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | EDR Digital Archive |

## ABERDEEN LN 2020 (Cont'd)

| | |
|---|---|
| 3012 | SUSAN SPAUR |
| 3017 | JEFFREY ZEHLER |
| | KRISTA HRIVNAK |
| | KRISTA ZEHLER |
| 3022 | ERIC HERNANDEZ |
| | MANUEL HERNANDEZ |
| 3040 | CINDY BOTTENHAGE |
| | HONGBO YANG |
| | JIHUA LIU |
| 3041 | JOHN HECKMAN |
| | KELLY HECKMAN |
| | ROBERT REY |
| 3050 | CHRISTINE MCCLAIN |
| | JAMAL ABOUELJOUD |
| | RYAN ABOUELJOUD |
| | RYAN MCCLAIN |
| | TERESA ABOUELJOUD |
| 3064 | CAMMIE HARRIS |
| | NADER JAWID |
| | STRONG CAMMIE |
| | WILLIAM HARRIS |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | EDR Digital Archive |

## E GREEN SPRINGS RD 2020

| | |
|---|---|
| 1960 | CALVIN REYNOLDS |
| | CELINE REYNOLDS |
| | DEBRA REYNOLDS |
| 1961 | DENISE HAFFNER |
| | ROBERT HAFFNER |
| 2010 | RENE WICK |
| 2011 | GREGORY GAUNT |
| | KENDRA GAUNT |
| 2101 | CHRISTINE GROTZINGER |
| | CHRISTINE HILTON |
| | DAVID HILTON |
| | DENISE CIRIMELE |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | EDR Digital Archive |

## GREEN VALLEY RD 2020

| | |
|---|---|
| 1680 | DAVID VOGEL |
| 1740 | MELODY MOORE |
| | NICOLE PAINE |
| 1768 | JODIE VANDERBURG |
| | LEE VANDERBURG |
| | MARIAN VANDERBURG |
| 1801 | ALBERTO ROMO |
| | LAUREN ROMO |
| | NICOLAS ROMO |
| | SHADIA ROMO |
| 1851 | ANTONIA ROMO |
| | RAMON ROMO |
| 1855 | ERIN ANDERSON |
| | JOHN ANDERSON |
| 1870 | GEORGE SHERMAN |
| 1880 | LARRY ARMES |
| 1901 | DAVID BACON |
| | DEBI BACON |
| | JODEE ROSS |
| | WALTER ROSS |
| 1937 | DAVID ALAMEDA |
| | DJ ALAMEDA |
| | TAMARA ARTOLA |
| 1960 | GREEN VALLEY FAMILY FARMS |
| 2001 | AARON ALAMEDA |
| | LLOMA ALAMEDA |
| | UTD ALAMEDA |
| 2045 | COCO PARKHURST |
| | KARI PARKHURST |
| | KENNETH PARKHURST |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | EDR Digital Archive |

## MARDEN DR 2020

| | |
|---|---|
| 2021 | MELISSA HENINGER |
| | NATHANIEL HENINGER |
| 2030 | AILEEN TEWKSBURY |
| | CHELSEA TEWKSBURY |
| | JEFFREY TEWKSBURY |
| 2071 | LEJLA SMAJKIC-VERIATO |
| 2091 | GRIFFEN LAUER |
| | KIMBERLY LAUER |
| | MARK GOMM DESIGN |
| 2125 | PATRICIA KENNEY |
| 2160 | CONNIE GLENN |
| | ROBERT GLENN |
| | TARA GLENN |
| 2181 | ELIZABETH MOELLER |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | EDR Digital Archive |

## VERDE VALLE LN 2020

| | |
|---|---|
| 3125 | EDWARD MC QUILLAN |
| | LYNDA MCQUILLAN |
| 3141 | JENNIFER SHORES |
| | MICHAEL SHORES |
| 3150 | DIRK HIMLEY |
| | TAMI TESHIMA REALTOR INC |
| 3200 | AMANDA PENA |
| | KIMBERLY DIXON |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | EDR Digital Archive |

# W GREEN SPRINGS RD 2020

| | |
|---|---|
| 1920 | AMY HUNRATH |
| | EARL MIARS |
| | LANCE HUNRATH |
| | PATSY MIARS |
| 1951 | DL VOGEL |
| 1961 | CODY WILLIAMS |
| | DANIEL WILLIAMS |
| | DESIRAE WILLIAMS |
| | JENNIFER WILLIAMS |
| | JOSHUA WILLIAMS |
| | MARY WILLIAMS |
| 1976 | JOSHUA WILLIAMS |
| 2000 | MARIA KADEL |
| | NABA KADEL |
| 2021 | ANDREW GOTTBERG |
| | DONALD GOTTBERG |
| | LYNETTE DEWILDE |
| | MARIA GOTTBERG |
| | ROWENA GOTTBERG |
| | SARA DEWILDE |
| 2040 | JOSHUA WILLIAMS |
| 2070 | SETH SCOTT |
| 2100 | GREG HANAVAN |
| | SANDY HANAVAN |
| | SHELLEY HANAVAN |
| 2120 | ANN LEU |
| | MERLIN LEU |
| 2161 | CHARLENE HOSSACK |
| | IVA HOSSACK |
| | JOHN HOSSACK |
| | KATIE HOSSACK |
| | KERRY HOSSACK |
| 2183 | CLARA BIEGLER |
| 2201 | HUBERT MORPHEW |
| | KAY MORPHEW |
| | KRISTINE MORPHEW |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

# ABERDEEN LN 2017

| | |
|---|---|
| 2665 | SEMKIW, GEORGE R |
| 2668 | CESPEDES, SAMUEL P |
| 2670 | YOUNG, RICHARD M |
| 2679 | LAMSON, JEFF L |
| 2688 | KUMAR, ARBIN C |
| 2696 | MORALES, ROBERT J |
| 2704 | TYAGI, ANURAG K |
| 2712 | TANNER, MARK P |
| 2715 | VANACORE, DEREK S |
| 2722 | DERKSEN, SCOTT H |
| 2730 | BRUNS, JUSTIN D |
| 2740 | REEVES, STEPHEN K |
| 2749 | NEWLOVE, JAMES H |
| 2752 | GRIMM, STEVEN M |
| 2761 | DYKSTRA, DEREK D |
| 2762 | MORRIS, RICHARD E |
| 2770 | CLARKE, MICHAEL P |
| 2776 | NAMBISAN, BYAS U |
| 2781 | GOLDMAN, JASON N |
| 2782 | HOSS, WAYNE A |
| 2790 | BRYAN, ANGIE M |
| 2795 | TRAN, HANH N |
| 2809 | COMSTOCK, DAVID D |
| 2810 | SETO, WINNIE |
| 2820 | BHATTACHARYA, ANIRBAN |
| 2821 | RILEY, JAY H |
| 2830 | MAUNDER, PAUL R |
| 2838 | HALL, THOMAS E |
| 2845 | JEN, JAMES T |
| 2846 | LAUNDIS, LINDA |
| 2857 | SABBE, FRED L |
| 2858 | TORCHIANA, CHRISTOPHER L |
| 2864 | LUCAS, SETH A |
| 2865 | AGUSTIN, ROGER R |
| 2873 | CRIPPEN, DAVID J |
| 2884 | ALLEN, RUSSELL |
| 2885 | MASHHADIALIREZA, HASSAN |
| 2892 | MIDDLETON, GREGORY S |
| 2893 | MAHLER, GLEN E |
| 2900 | BRANDON, BILL M |
| 2901 | HUPP, BILLY D |
| 2908 | GEORGALAKIS, LEDDY J |
| 2911 | BREEDEN, CHUCK C |
| 2921 | WILLIAMS, JAMES S |
| 2932 | PASHINA, ELENA |
| 2937 | LYONS, JASON |
| 2950 | JENSEN, CHRISTOPHER A |
| 2970 | AGARPAO, CHRISTOPHER P |
| | MATRIX SIX |
| 2981 | SIANEZ, FRANK L |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

## ABERDEEN LN 2017 (Cont'd)

| | |
|---|---|
| 2982 | VARSHNEY, SANJAY B |
| 2988 | IKEMOTO, MICHAEL J |
| 2994 | LOSIER, THOMAS J |
| 3004 | SETO, ANGELO Y |
| 3005 | SHEETS, MICHAEL L |
| 3012 | SPAUR, DAVID L |
| 3017 | ZEHLER, JEFFREY P |
| 3022 | HERNANDEZ, MANUEL J |
| 3040 | YANG, HONGBO Q |
| 3064 | ESTES, DELAYNE |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

# E GREEN SPRINGS RD 2017

| | |
|---|---|
| 1960 | REYNOLDS, CALVIN E |
| 1961 | DENISE, HAFFNER |
| 2010 | WICK, RENEE C |
| 2011 | VANDYKE, DON A |
| 2042 | SCHOPPMAN, MARK A |
| 2101 | DAVID, HILTON |
| 2175 | SHERYL, CLUCAS |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

## GREEN VALLEY RD 2017

| | |
|---|---|
| 1680 | TOMLIN, JULIE M |
| 1768 | VANDERBURG, LEE D |
| 1801 | ROMO, NICOLAS |
| 1840 | MIKULACO, RONALD P |
| 1851 | ROMO, RAMON R |
| 1880 | RATTO, TOM |
| 1937 | ARTOLA, TAMARA |
| 1960 | RIZZUTO, MICHAEL J |
| 2001 | ALAMEDA, LLOMA S |
| 2045 | PARKHURST, KENNETH S |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

# MARDEN DR 2017

| | |
|---|---|
| 2021 | ODONOGHUE, BIANCA |
| 2030 | TEWKSBURY, LINDSEY |
| 2039 | BARE, DAVID |
| 2091 | GOMM, MARK N |
| | MARK GOMM DESIGN |
| 2125 | KENNEY, WILLIAM E |
| 2160 | MASEULI, ELIZABETH L |
| 2181 | MOELLER, RYAN M |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | Cole Information |

# VERDE VALLE LN 2017

| | |
|---|---|
| 3125 | MCQUILLAN, LYNDA L |
| 3141 | SHORES, MICHAEL L |
| 3150 | BLACK, BRIAN T |
| 3163 | JENSEN, NICK J |
| 3200 | DIXON, KIMBERLY S |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

# W GREEN SPRINGS RD 2017

| | |
|---|---|
| 1911 | WILKINSON, KIMBERLY |
| 1920 | MIARS, EARL L |
| 1961 | WILLIAMS, CODY E |
| 1976 | WILLIAMS, JOSHUA |
| 2021 | DEWILDE, BRIAN |
| 2040 | WILLIAMS, JOSHUA L |
| 2070 | SCOTT, SETH W |
| 2100 | HANAVAN, GREG A |
| 2120 | LEU ENTERPRISES |
| | LEU, MERLIN R |
| 2161 | HOSSACK, JOHN T |
| 2183 | BIEGLER, CLARA C |
| 2201 | MORPHEW, HUBERT G |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

# ABERDEEN LN 2014

2665 SEMKIW, GEORGE R
2668 CESPEDES, SAMUEL P
2679 LAMSON, JEFF L
2680 HU, YAJUN
2688 KUMAR, ARBIN C
2696 MORALES, ROBERT J
2704 OCCUPANT UNKNOWN,
2712 BANEY, ROBERT
2715 GUEVARA, ALFREDO P
2722 DERKSEN, SCOTT H
2730 OCCUPANT UNKNOWN,
2749 OCCUPANT UNKNOWN,
2752 GRIMM, STEVEN M
2761 HANSEN, JOHN G
2762 MORRIS, RICHARD E
2770 CLARKE, MICHAEL P
2776 NAMBISAN, BYAS U
2781 GOLDMAN, JASON N
2782 DJIFROUDI, BABAK I
2790 BRYAN, CHRIS J
2809 COMSTOCK, TRAVIS
2810 SETO, WINNIE
2820 BHATTACHARYA, ANIRBAN
2821 RILEY, JAY H
2830 MAUNDER, PAUL R
2838 HALL, THOMAS E
2845 JEN, JAMES T
2846 NOVOTNY, FRANK J
2857 OCCUPANT UNKNOWN,
2858 TORCHIANA, CHRISTOPHER L
2864 GREENLEAF, STEPHEN T
2865 FONTANOZ, ILUMINADA P
2872 ALEXIS, RANJEET
2873 CRIPPEN, DAVID J
2884 OCCUPANT UNKNOWN,
2885 MORRICAL, TOM C
2892 POTTS, JEFFREY M
2893 MAHLER, GLEN E
2900 BRANDON, BILL M
2901 ZIMMERMAN, ROSALIE B
2908 GEORGALAKIS, LEDDY J
2911 BREEDEN, CHUCK C
2921 HALSEY, DONNEL A
2924 OCCUPANT UNKNOWN,
2932 AUGUST, THERESA
2937 LYONS, MICHAEL
2950 JENSEN, CHRISTOPHER A
2970 MICHAEL, J
2971 SHARKEY, PATRICK J
2981 SIANEZ, FRANK L

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

## ABERDEEN LN 2014 (Cont'd)

| | |
|---|---|
| 2982 | VARSHNEY, SANJAY B |
| 2988 | IKEMOTO, MICHAEL J |
| 2994 | OCCUPANT UNKNOWN, |
| 3004 | PEARL, SETO |
| 3005 | SHEETS, MICHAEL L |
| 3012 | SHATTUCK, SYLVIA S |
| 3017 | ZEHLER, JEFFREY P |
| 3022 | HERNANDEZ, MANUEL J |
| 3040 | CHELINI, GARY M |
| 3041 | SANSOM, KEVIN J |
| 3047 | PARHAM, CARRIE |
| 3050 | ABOUELJOUD, JAMAL |
| 3064 | DANESH, WALI A |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

## E GREEN SPRINGS RD 2014

| | |
|---|---|
| 1960 | OCCUPANT UNKNOWN, |
| 1961 | HARVEY, THOMAS J |
| 2010 | WICK, RENEE C |
| 2011 | VANDYKE, DON A |
| 2042 | OCCUPANT UNKNOWN, |
| 2101 | CIRIMELE, DENISE A |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

## GREEN VALLEY RD 2014

| | |
|---|---|
| 1680 | TOMLIN, JULIE M |
| 1740 | RAMOS, MIKE K |
| 1768 | VANDERBURG, LEE D |
| 1801 | ROMA, ALBERTO O |
| 1838 | OCCUPANT UNKNOWN, |
| 1840 | MIKULACO, RONALD P |
| 1851 | ROMO, RAMON R |
| 1856 | OCCUPANT UNKNOWN, |
| 1870 | SHERMAN, GEORGE A |
| 1901 | ADAMS, ROGER E |
| 1937 | DAVID, JOSEPH |
| 2001 | ALAMEDA, AARON D |
| 2045 | OCCUPANT UNKNOWN, |
| 2051 | OCCUPANT UNKNOWN, |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

# MARDEN DR 2014

| | |
|---|---|
| 2021 | PRICER, BYRON D |
| 2030 | TEWKSBURY, JEFFREY R |
| 2039 | BARE, DAVID C |
| 2071 | MORTON, CHAD |
| 2091 | KYDD, GEORGE J |
| | MARK GOMM DESIGN |
| 2125 | KENNEY, WILLIAM E |
| 2151 | TOUHY, THOMAS J |
| 2160 | OCCUPANT UNKNOWN, |
| 2181 | MOELLER, GREGORY P |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | Cole Information |

# VERDE VALLE LN 2014

| | |
|---|---|
| 3125 | OCCUPANT UNKNOWN, |
| 3141 | SHORES, MICHAEL L |
| 3150 | BLACK, BRIAN T |
| 3163 | JENSEN, NICK J |
| 3200 | PENA, ROBERT N |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

# W GREEN SPRINGS RD 2014

| | |
|---|---|
| 1911 | OCCUPANT UNKNOWN, |
| 1920 | MIARS, EARL L |
| 1961 | WILLIAMS, CODY E |
| 1976 | ELISA, GABRIEL |
| 2000 | KADEL, NABA R |
| 2021 | DEWILDE, DAVID A |
| 2040 | TURSE, JOSEPH F |
| 2070 | SCOTT, SETH W |
| 2100 | HANAVAN, GREG A |
| 2120 | LEU ENTERPRISES |
| | LEU, MERLIN R |
| 2161 | HOSSACK, JOHN T |
| 2183 | BIEGLER, CLARA C |
| 2201 | MORPHEW, HUBERT G |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

# ABERDEEN LN 2010

2665 SEMKIW, GEORGE R
2668 CESPEDES, SAMUEL P
2670 YOUNG, JENKUAN K
2679 OCCUPANT UNKNOWN,
2680 HU, YAJUN
2688 HANKO, MARK J
2696 BUNK, TERRY A
2704 FRENCH, KATHERINE A
2712 TANNER, MARK P
2715 GUEVARA, ALFREDO P
REALTIME CONSULTING SVC LLC
2722 OCCUPANT UNKNOWN,
2730 OCCUPANT UNKNOWN,
2740 SAVAGE, JEFFREY E
2749 OCCUPANT UNKNOWN,
2752 OCCUPANT UNKNOWN,
2762 OCCUPANT UNKNOWN,
2770 CLARKE, MICHAEL P
2776 NAMBISAN, BYAS U
2781 GAESSER, DONALD D
2782 DJIFROUDI, BABAK L
2790 HERGENREDER, BRIAN J
2795 TRAN, HANH N
2809 COMSTOCK, DAVID D
2810 ELLISTON, DAVID E
2820 BHATTACHARYA, ANIRBAN
2821 RILEY, JAY H
2830 MAUNDER, PAUL R
2838 PRESNALL, JON M
2845 JEN, JAMES T
YOGIWARE
2846 OCCUPANT UNKNOWN,
2857 SABBE, FRED R
2858 TORCHIANA, CHRISTOPHER L
2864 GREENLEAF, STEPHEN T
2865 AGUSTIN, ROGER R
2872 ALEXIS, RANJEET
2873 CRIPPEN, DAVID J
2884 OCCUPANT UNKNOWN,
2885 MORRICALL, TOM
2892 POTTS, JEFFREY M
2893 OCCUPANT UNKNOWN,
2900 BRANDON, BILL M
REAL PROPERTY VENTURE
2901 ZIMMERMAN, JOHN B
2908 GEORGALAKIS, LEDDY R
2911 BREEDEN, DENNIS C
2916 CHAMPION, DUANE E
2921 HALSEY, DONNEL A
2924 WESTERMAN, STEVEN J

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

## ABERDEEN LN 2010 (Cont'd)

2932 PASHINA, ELENA
VALLEY VIEW RESIDENTIAL CARE
2937 LYONS, MICHAEL
2950 JENSEN, CHRISTOPHER A
2969 NAFTZGER, KENNETH E
2970 GILLES, MICHAEL J
2971 SHARKEY, PATRICK J
2981 SIANEZ, FRANK L
2982 VARSHNEY, SANJAY B
2988 OCCUPANT UNKNOWN,
2994 HAUCK, FRANK W
3004 FITCH, ADRIANN
3005 DEVOTO, MYRON R
3012 SPAUR, DAVID L
3017 ZEHLER, JEFFREY P
3022 HERNANDEZ, MANUEL J
3040 BOTTENHAGE, CINDY S
3050 MCCLAIN, MICHAEL C
3064 DANESH, WALI A

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

## E GREEN SPRINGS RD 2010

| | |
|---|---|
| 1960 | OCCUPANT UNKNOWN, |
| 1961 | HARVEY, THOMAS J |
| 2010 | WICK, RENEE C |
| 2011 | VANDYKE, DON A |
| 2042 | OCCUPANT UNKNOWN, |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

## GREEN VALLEY RD 2010

| | |
|---|---|
| 1680 | VOGEL, DAVID L |
| 1740 | OBRIEN, COLLEEN E |
| 1768 | VANDERBURG, MACON L |
| 1801 | ROMA, ALBERTO O |
| 1838 | MARTINEZ, MARGARITO |
| 1840 | MIKULACO, RONALD P |
| 1851 | ROMO, RAMON R |
| 1870 | SHERMAN, GEORGE A |
| 1901 | ADAMS, ROGER E |
| 1937 | ALAMEDA, DAVE J |
| | INTERIORS BY BOB |
| 2001 | ALAMEDA, LLOMA S |
| 2045 | OCCUPANT UNKNOWN, |
| 2051 | OCCUPANT UNKNOWN, |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

## MARDEN DR 2010

| | |
|---|---|
| 2021 | PRICER, TENLEY K |
| 2030 | MARSHALL, CONNIE M |
| 2039 | OCCUPANT UNKNOWN, |
| 2071 | RENDON, VERNARDO L |
| 2091 | GOMM, MARK N |
| 2125 | OCCUPANT UNKNOWN, |
| 2151 | DOUGAN, A |
| 2160 | MASEUI, D |
| 2181 | MOELLER, GREGORY P |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | Cole Information |

# VERDE VALLE LN 2010

| | |
|---|---|
| 3125 | EMDADI, KAZEM R |
| 3141 | SHORES, MICHAEL L |
| 3150 | TESHIMA, TAMI C |
| 3159 | TESHIMA, TAMI |
| 3163 | JENSEN, NICK J |
| 3200 | DIXON, KIMBERLY S |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

# W GREEN SPRINGS RD 2010

| | |
|---|---|
| 1911 | LILES, JACKIE L |
| 1920 | MIARS, EARL L |
| 1961 | WILLIAMS, CODY E |
| 1976 | MCDANIEL, BETTE J |
| 2000 | SAIZ, FRANK |
| 2021 | DEWILDE, DAVID A |
| 2040 | TURSE, JOSEPH F |
| 2070 | SCOTT, SETH W |
| | URBAN 44 MANAGEMENT |
| 2100 | HANAVAN, GREG A |
| 2120 | 1ST CALL MAINTENANCE & PRPRTY |
| | LEU, MERLIN R |
| 2161 | HOSSACK, JOHN T |
| 2183 | BIEGLER, CLARA C |
| 2201 | MORPHEW, HUBERT G |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

# ABERDEEN LN 2005

| | |
|---|---|
| 2665 | SEMKIW, GEORGE R |
| 2668 | CESPEDES, SAMUEL P |
| 2670 | YOUNG, JENKUAN K |
| 2679 | LAMSON, JEFFREY L |
| 2680 | PARRETT, RANDY K |
| 2688 | HANKO, MARK J |
| 2696 | NAFTZGER, KENNETH E |
| 2704 | FRENCH, AUBREY V |
| 2712 | TANNER, MARK P |
| 2715 | OCCUPANT UNKNOWN,<br>REALTIME CONSULTING SERVICE LLC |
| 2722 | OCCUPANT UNKNOWN, |
| 2730 | OCCUPANT UNKNOWN,<br>THE DONNELLY GROUP |
| 2740 | OCCUPANT UNKNOWN, |
| 2749 | NEWLOVE, JAMES H |
| 2752 | GOSSETT, STANLEY T |
| 2761 | DEVEREAUX, JENNIFER J |
| 2762 | ZAJAC, MELISSA A |
| 2770 | CLARKE, MICHAEL P |
| 2776 | MANNING, IRENE P |
| 2781 | GAESSER, DONALD D |
| 2782 | TALBERT, BRIAN H |
| 2790 | CASCIOPPO, STEPHEN P |
| 2795 | BUI, TOAN D |
| 2809 | COMSTOCK, DAVID L |
| 2810 | ELLISTON, DAVID E |
| 2820 | BHATTACHARYA, ANIRBAN |
| 2821 | RILEY, JAY H |
| 2830 | MAUNDER, PAUL R |
| 2837 | OCCUPANT UNKNOWN, |
| 2838 | PRESNALL, JON M |
| 2845 | HSU, JUDY |
| 2846 | LEVINSKY, CHARLES J |
| 2857 | SABBE, FRED R |
| 2858 | MILLS, WILLIAM R |
| 2864 | GREENLEAF, STEPHEN T |
| 2865 | AGUSTIN, ROGER R |
| 2873 | CRIPPEN, DAVID J |
| 2884 | BENNETT, LACRISHA |
| 2885 | WELCH, IORI |
| 2892 | POTTS, JEFFREY M |
| 2893 | STRICKLAND, JEFF L |
| 2900 | BRANDON, BILL D |
| 2901 | OCCUPANT UNKNOWN, |
| 2908 | GEORGALAKIS, LEDDY R |
| 2911 | BREEDEN, DENNIS C |
| 2916 | CHAMPION, DUANE E |
| 2921 | HALSEY, DONNEL A |
| 2924 | WESTERMAN, STEVEN |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

## ABERDEEN LN 2005 (Cont'd)

| | |
|---|---|
| 2932 | CORONA, NADIA |
| 2937 | LYONS, MICHAEL |
| 2950 | JENSEN, CHRIS A |
| 2970 | GILLES, MICHAEL J |
| 2971 | SHARKEY, PATRICK J |
| 2981 | SIANEZ, FRANK L |
| 2982 | LAUNEY, STEVE M |
| 2988 | SUESSE, KENNETH M |
| 2994 | HAUCK, FRANK W |
| 3004 | WRBA, CHRISTOPHER D |
| 3005 | DEVOTO, MYRON R |
| 3012 | OCCUPANT UNKNOWN,<br>TOWN & COUNTRY APPRAISERS |
| 3017 | ZEHLER, JEFFREY |
| 3022 | HERNANDEZ, MANUEL J |
| 3040 | BOTTENHAGEN-FICKEN, CYNTHIA S |
| 3041 | REY, ROBERT L |
| 3050 | MCCLAIN, MICHAEL C<br>MIKE MCCLAIN SAFETY & ENVIRONMENTAL |
| 3064 | DANESH, WALI A |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

## E GREEN SPRINGS RD 2005

| | |
|---|---|
| 1960 | FORNI, GARY K |
| 1961 | WELCH, GREGG L |
| 2010 | WICK, MICHAEL M |
| 2101 | BOULDIN, BILL F |
| 2175 | STANTON, CHRIS J |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

## GREEN VALLEY RD 2005

| | |
|---|---|
| 1680 | VOGEL, DAVID L |
| 1740 | RAMOS, MIKE K |
| 1768 | VANDERBURG, LEE D |
| 1801 | ROMA, ALBERTO O |
| 1838 | ACOSTA, JUANA |
| 1840 | PICASSO PLASTERING |
| 1851 | ROMO, RAMON R |
| 1870 | SHERMAN, GEORGE A |
| 1880 | SHERMAN, LOUIS S |
| 1901 | ROSS, WALTER J |
| 1937 | ALAMEDA, DAVE J |
| 1960 | ROGERS, WARREN |
| 2001 | ALAMEDA, DAVID J |
| 2051 | GELLINCK, TIM |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

# MARDEN DR 2005

| | |
|---|---|
| 2021 | MARTINEZ, TENLEY K |
| 2030 | QCSI |
| | TEWKSBURY, JEFFREY R |
| 2039 | BARE, DAVID C |
| 2071 | OCCUPANT UNKNOWN, |
| 2091 | GOMM, MARK N |
| 2125 | OCCUPANT UNKNOWN, |
| 2151 | HOAK, TRA |
| 2160 | MIRANDA, LAURA Y |
| 2181 | EAST BAY SHEET METAL WORKS INC |
| | MOELLER, GREGORY P |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | Cole Information |

# VERDE VALLE LN 2005

| | |
|---|---|
| 3125 | EMDADI, KAZEM R |
| | TETA ELECTRONICS |
| 3141 | SHORES, MICHAEL L |
| 3150 | TESHIMA, TAMI C |
| 3159 | TESHIMA, TAMI |
| 3163 | JENSEN, NICK J |
| 3200 | DIXON, KIMBERLY S |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

# W GREEN SPRINGS RD 2005

| | |
|---|---|
| 1911 | OCCUPANT UNKNOWN, |
| 1920 | MIARS, EARL L |
| 1951 | VOGEL, DAVID L |
| 1961 | KEN WILLIAMS CONSTRUCTION |
| | WILLIAMS, JOSHUA L |
| 1976 | MCDANIEL, BETTE J |
| 2000 | SAIZ, FRANK |
| 2021 | DEWILDE, DAVID A |
| 2040 | TURSE, JOSEPH F |
| 2070 | SCOTT, SETH W |
| 2100 | HANAVAN, GREG A |
| 2120 | LEU, MERLIN R |
| | LEW ENTERPRISES CUSTOM HOMES |
| 2161 | HOSSACK, JOHN T |
| 2183 | BIEGLER, GIDEON |
| 2201 | OCCUPANT UNKNOWN, |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

# GREEN SPRINGS RD 2000

| | |
|---|---|
| 1920 | MIARS, EARL |
| 1951 | LOPEZ, ROBERT |
| 1976 | MCDANIEL, CARL |
| 2000 | SAIZ, FRANK |
| 2010 | OCCUPANT UNKNOWN, |
| 2021 | DEWILDE, DAVID A |
| 2040 | TURSE, JOSEPH |
| 2070 | GAMBLE, DUARD E |
| 2100 | HANAVAN, GREG |
| 2120 | LEU ENTERPRISES |
| | LEU, MERLIN R |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

## GREEN VALLEY RD 2000

| | |
|---|---|
| 1680 | FRAZIER, MARY F |
| 1740 | OBRIEN, COLLEEN |
| 1742 | GLASSER, MICHAEL J |
| 1768 | VANDERBURG, LEE |
| 1801 | RICHARDSON, DAVID L |
| 1838 | ACOSTA, JUANA |
| 1840 | OCCUPANT UNKNOWN, |
| 1851 | HANSEN, HARVEY A |
| 1870 | SHERMAN, GEORGE |
| 1880 | SHERMAN, LOUIS S |
| 1901 | ROSS WALTER J |
| | VALINE, MARVINE V |
| 1937 | ALAMEDA, DAVE |
| | BOBS INTERIORS |
| | INTERIORS BY BOB |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

## MARDEN DR 2000

| | |
|---|---|
| 2030 | TEWKSBURY, JEFF |
| 2091 | HOEFNAGELS, DOROTHY |
| 2160 | R W E WEATHERPROOFING |
| | THOMAS, EVERETT B |
| 2165 | KENNEY, WILLIAM E |
| 2181 | MOELLER, GREGORY P |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | Cole Information |

## VERDE VALLE LN 2000

| | |
|---|---|
| 3125 | PARDUE, WILLIAM |
| 3141 | SHORES, M |
| 3150 | OCCUPANT UNKNOWN, |
| 3163 | JENSEN, NICK |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

## GREEN SPRINGS RD 1995

| | |
|---|---|
| 1920 | OCCUPANT UNKNOWNN |
| 1951 | LOPEZ, ROBERT |
| 1961 | WILLIAMS, KENNETH V |
| 1976 | MCDANIEL, CARL |
| 1977 | GAMBLE, DUARD E |
| 1984 | OCCUPANT UNKNOWNN |
| 2000 | LOPEZ, ROBERT |
| 2021 | DEWILDE, DAVID A |
| 2040 | TURSE, JOSEPH |
| 2070 | GAMBLE, DUARD E |
| 2100 | HOOKER, RUSSELL |
| 2161 | MCCONNELL, YVONNE |
| 2175 | MCKINLEY, TIM |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

## GREEN VALLEY RD 1995

1740 A CHILDS TOUCH PRESCHOOL
OBRIEN, COLLEEN E
1768 VANDERBURG, LEE
1801 FARMERS INSURANCE GROUP
RICHARDSON, DAVID L
1870 SHERMAN, GEORGE
1901 OCCUPANT UNKNOWNN
1937 ALAMEDA, DAVE

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

# MARDEN DR 1995

| | |
|---|---|
| 2030 | TEWKSBURY, JEFF |
| 2125 | SHERRARD, JOHN C |
| 2151 | TOSCANO, ANN |
| 2160 | THOMAS, EVERETT B |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | Cole Information |

# VERDE VLY LN 1995

| | |
|---|---|
| 3125 | ROGERS, LISA |
| 3141 | SHORES, MICHAEL L |
| 3163 | JENSEN, NICK |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

# GREEN SPRINGS RD 1992

| | |
|---|---|
| 1920 | MIARS, EARL |
| 1951 | LOPEZ, ROBERT |
| 1976 | MCDANIEL, CARL |
| 1977 | GAMBLE, DUARD E |
| 2100 | HOOKER, RUSSELL |
| 2175 | MCKINNEY, TIM |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

# GREEN VALLEY RD 1992

| | |
|---|---|
| 1740 | A CHILDS PRESCHOOL |
| 1768 | VANDERBURG, LEE |
| 1801 | RICHARDSON D INS |
| | RICHARDSON, DAVID L |
| 1851 | HANSEN, HARVEY A |
| 1870 | SHERMAN, GEORGE |
| 1901 | ROSS, WALTER J |
| 1937 | ALAMEDA, DAVE |
| | INTERIORS BY BOB |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Cole Information |

# MARDEN DR 1992

2030 TEWKSBURY, JEFF
2125 CORNIER, D J

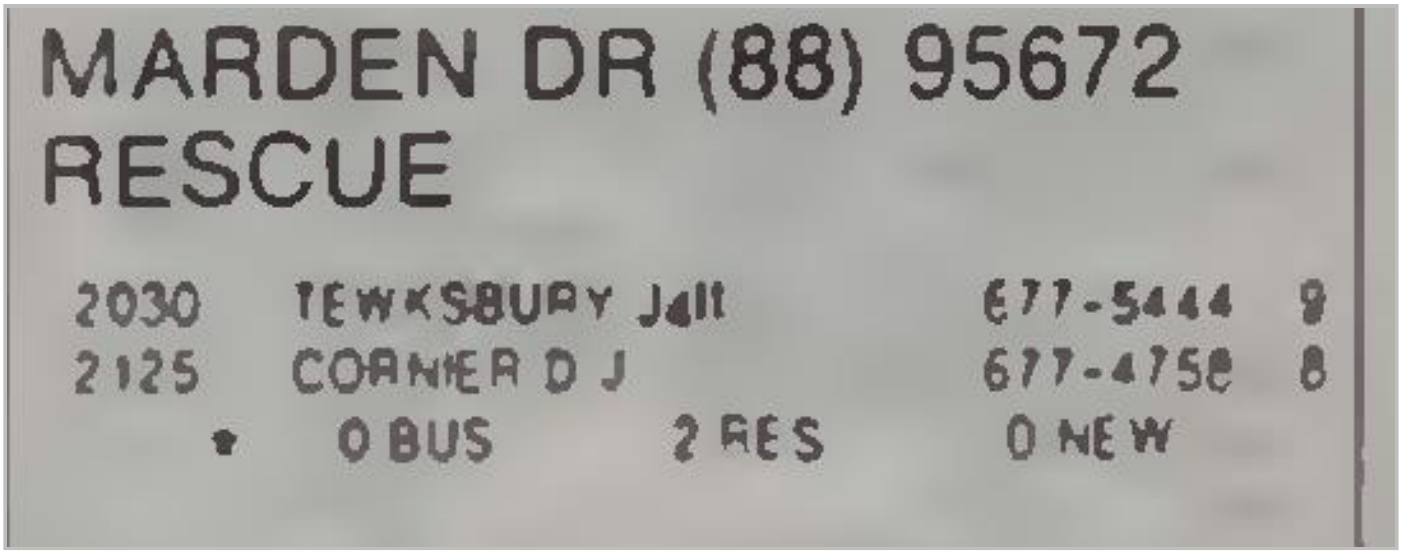
| Target Street | Cross Street | Source |
| --- | --- | --- |
| ✓ | - | Cole Information |

# VERDE VALLE LN 1992

3125 ROGERS, L

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Haines Criss-Cross Directory |

## MARDEN DR 1990



| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Haines Criss-Cross Directory |

## MARDEN DR 1986



| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | Haines Criss-Cross Directory |

## MARDEN DR 1981



MARDEN DR 95672
RESCUE

| | | | |
|---|---|---|---|
| 2121 | CONNOR JOS | 933-3646 | 0 |
| 2160 | DEFRANCO JOS | 933-0231 | 0 |

★ 0 BUS 2 RES 0 NEW

# Appendix F

## Topographic Maps

3200 VERDE VALLE LN

3200 VERDE VALLE LN

EL DORADO HILLS, CA 95762

Inquiry Number: 7624776.4

April 15, 2024

# EDR Historical Topo Map Report

## with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# EDR Historical Topo Map Report

04/15/24

**Site Name:**

3200 VERDE VALLE LN
3200 VERDE VALLE LN
EL DORADO HILLS, CA 95762
EDR Inquiry # 7624776.4

**Client Name:**

Terraphase Engineering Inc.
1300 Clay Street Suite 1000
Oakland, CA 94612
Contact: Hallie Douglas

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Terraphase Engineering Inc. were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

***Search Results:***

**P.O.#** C077.001.001
**Project:** TK Consulting

***Coordinates:***

| | |
|---|---|
| **Latitude:** | 38.705513 38° 42' 20" North |
| **Longitude:** | -121.046332 -121° 2' 47" West |
| **UTM Zone:** | Zone 10 North |
| **UTM X Meters:** | 669877.80 |
| **UTM Y Meters:** | 4285909.33 |
| **Elevation:** | 1101.10' above sea level |

**Maps Provided:**

| | |
|---|---|
| 2021 | 1941 |
| 2018 | 1893 |
| 2015 | 1892 |
| 2012 | 1891 |
| 1980 | |
| 1973 | |
| 1953 | |
| 1944 | |

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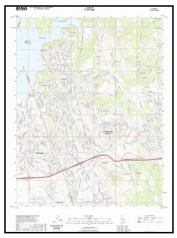
## *Topo Sheet Key*

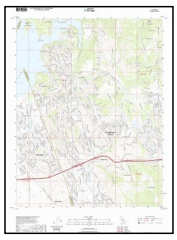
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 2021 Source Sheets



Clarksville
2021
7.5-minute, 24000

### 2018 Source Sheets



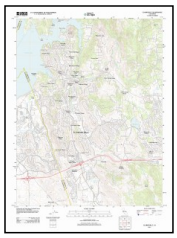
Clarksville
2018
7.5-minute, 24000

### 2015 Source Sheets



Clarksville
2015
7.5-minute, 24000

### 2012 Source Sheets



Clarksville
2012
7.5-minute, 24000

## *Topo Sheet Key*

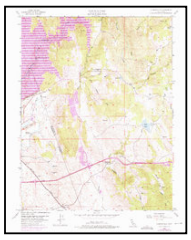
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 1980 Source Sheets



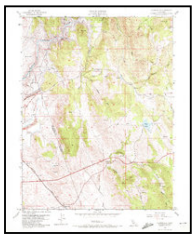
Clarksville
1980
7.5-minute, 24000
Aerial Photo Revised 1978

### 1973 Source Sheets



Clarksville
1973
7.5-minute, 24000
Aerial Photo Revised 1973

### 1953 Source Sheets



Clarksville
1953
7.5-minute, 24000
Aerial Photo Revised 1952

### 1944 Source Sheets



Folsom
1944
15-minute, 62500

## *Topo Sheet Key*

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 1941 Source Sheets



Folsom
1941
15-minute, 62500

### 1893 Source Sheets



Sacramento
1893
30-minute, 125000

### 1892 Source Sheets



Sacramento
1892
30-minute, 125000

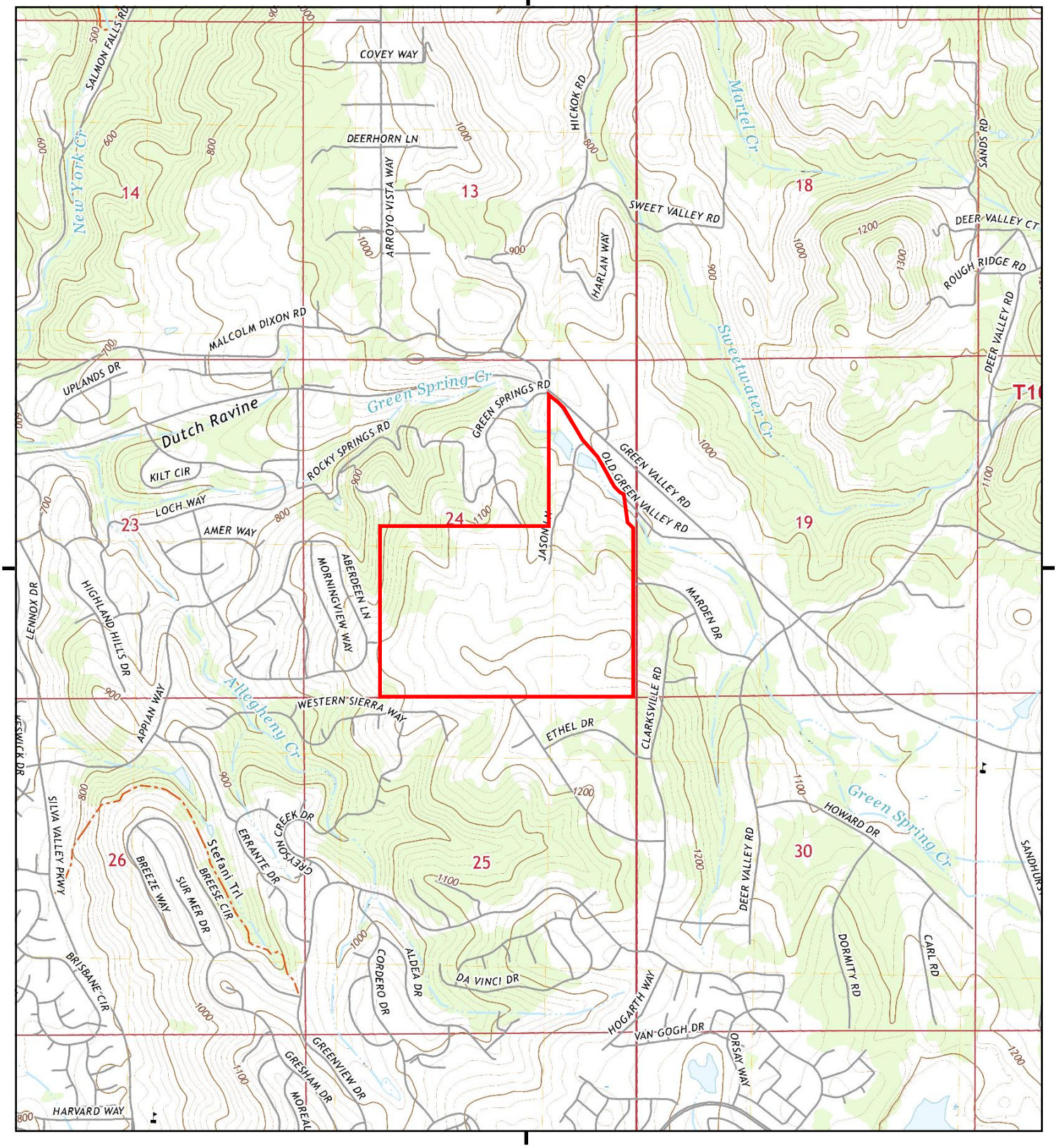
### 1891 Source Sheets



Sacramento
1891
30-minute, 125000

# Historical Topo Map

2021




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

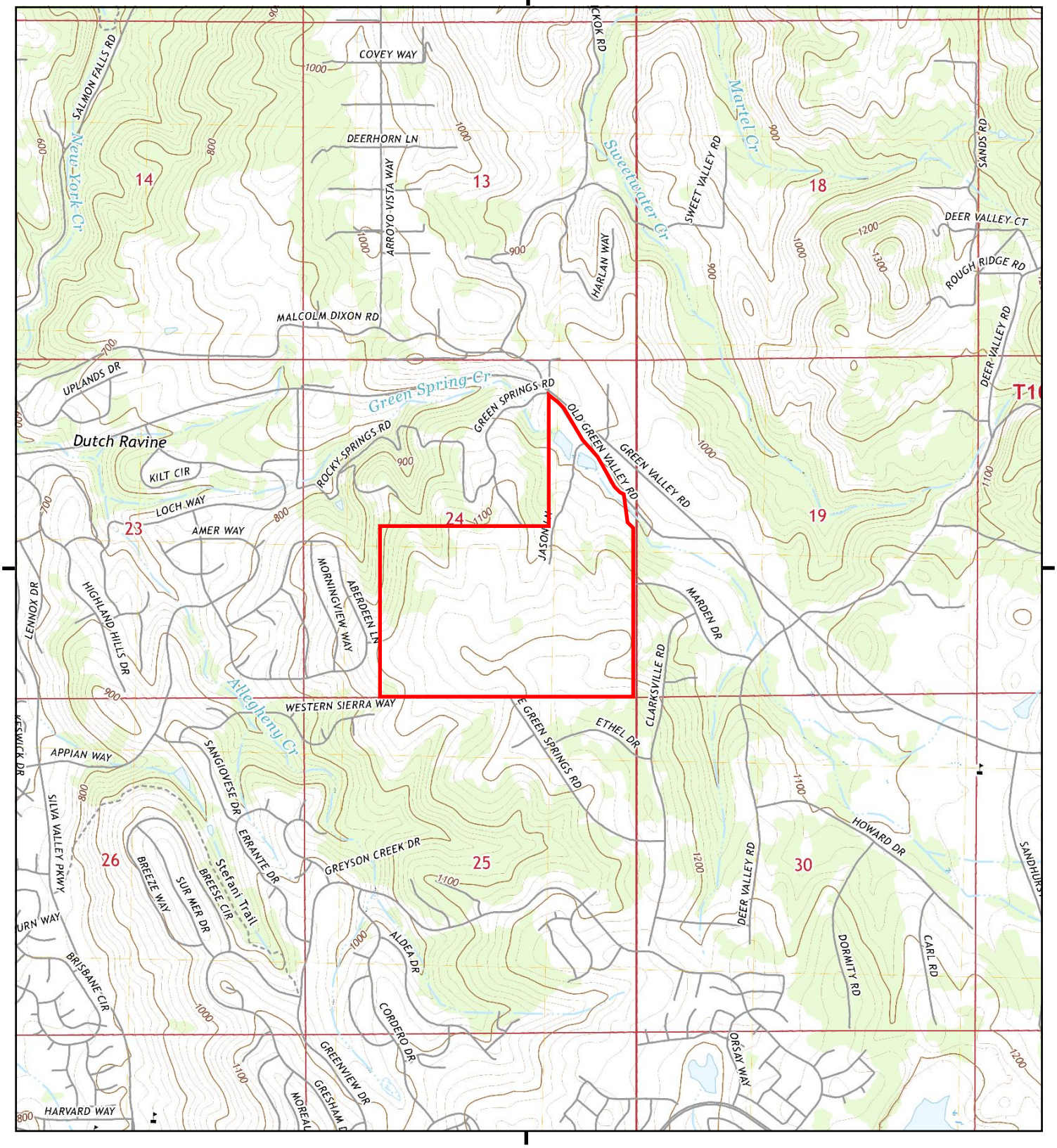
TP, Clarksville, 2021, 7.5-minute

SITE NAME: 3200 VERDE VALLE LN
ADDRESS: 3200 VERDE VALLE LN
EL DORADO HILLS, CA 95762
CLIENT: Terraphase Engineering Inc.

N

# Historical Topo Map

2018




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

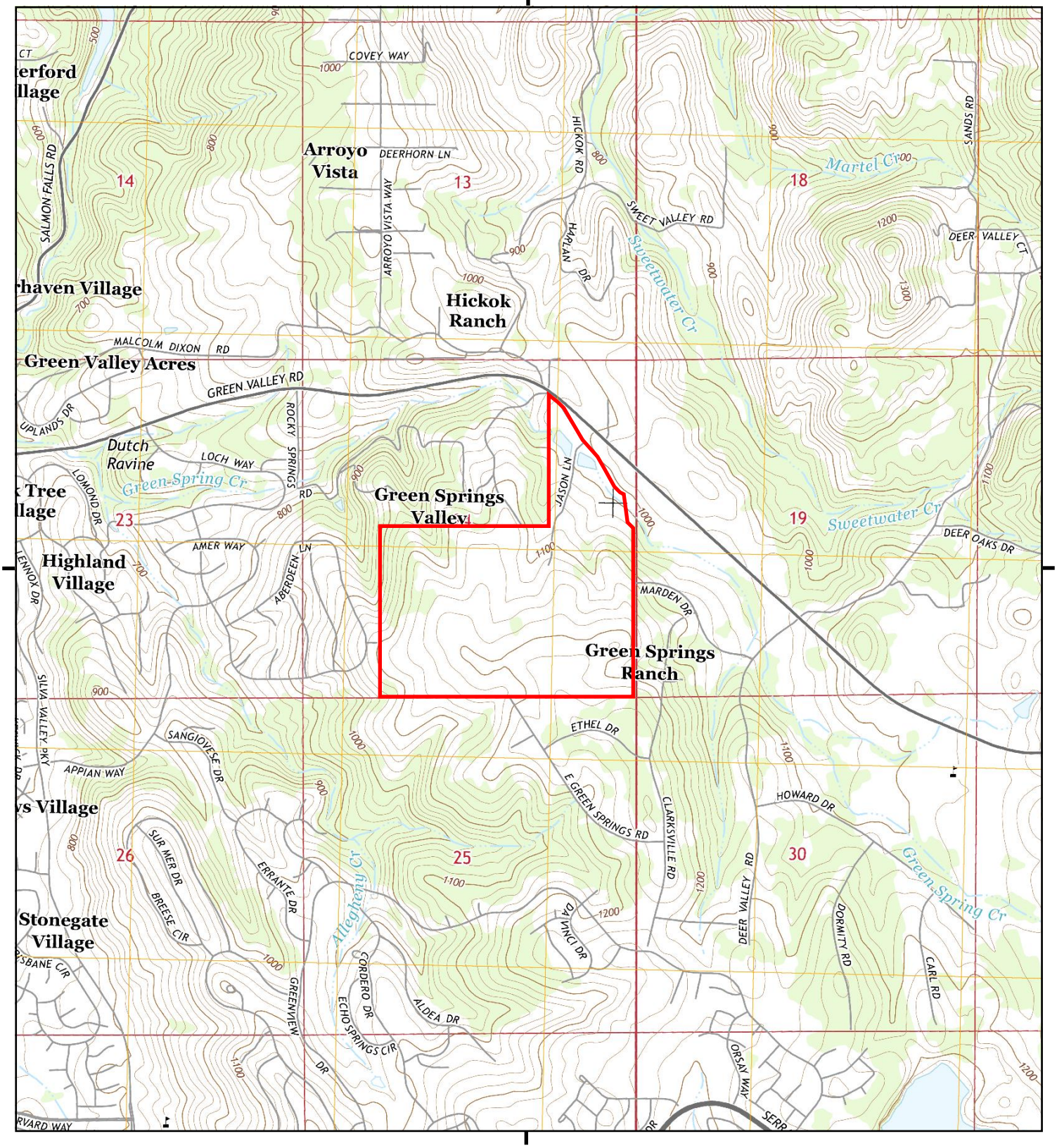
TP, Clarksville, 2018, 7.5-minute

SITE NAME: 3200 VERDE VALLE LN
ADDRESS: 3200 VERDE VALLE LN
EL DORADO HILLS, CA 95762
CLIENT: Terraphase Engineering Inc.

N

# Historical Topo Map

2015




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

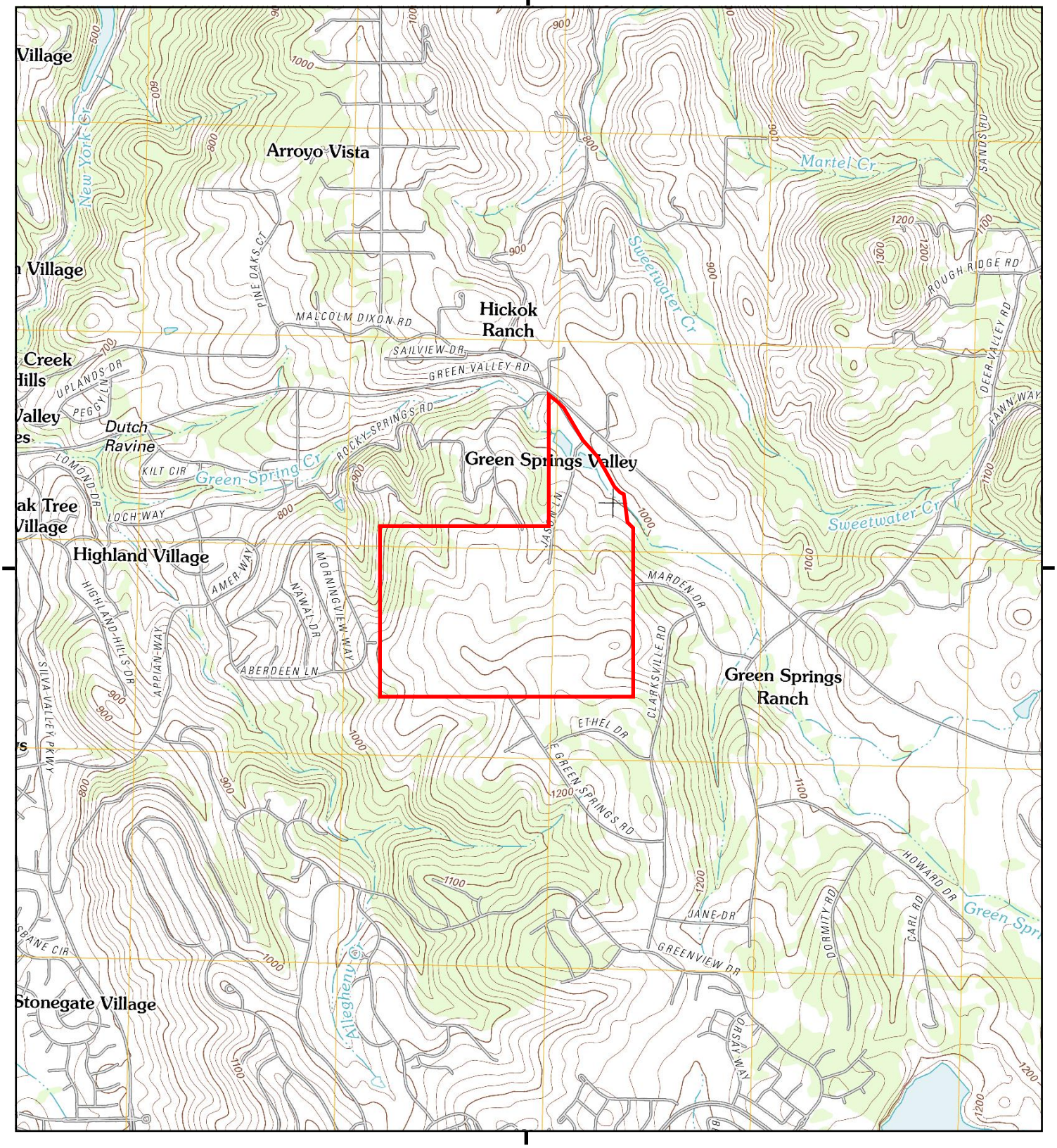
TP, Clarksville, 2015, 7.5-minute

SITE NAME: 3200 VERDE VALLE LN
ADDRESS: 3200 VERDE VALLE LN
EL DORADO HILLS, CA 95762
CLIENT: Terraphase Engineering Inc.

N

# Historical Topo Map

2012




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

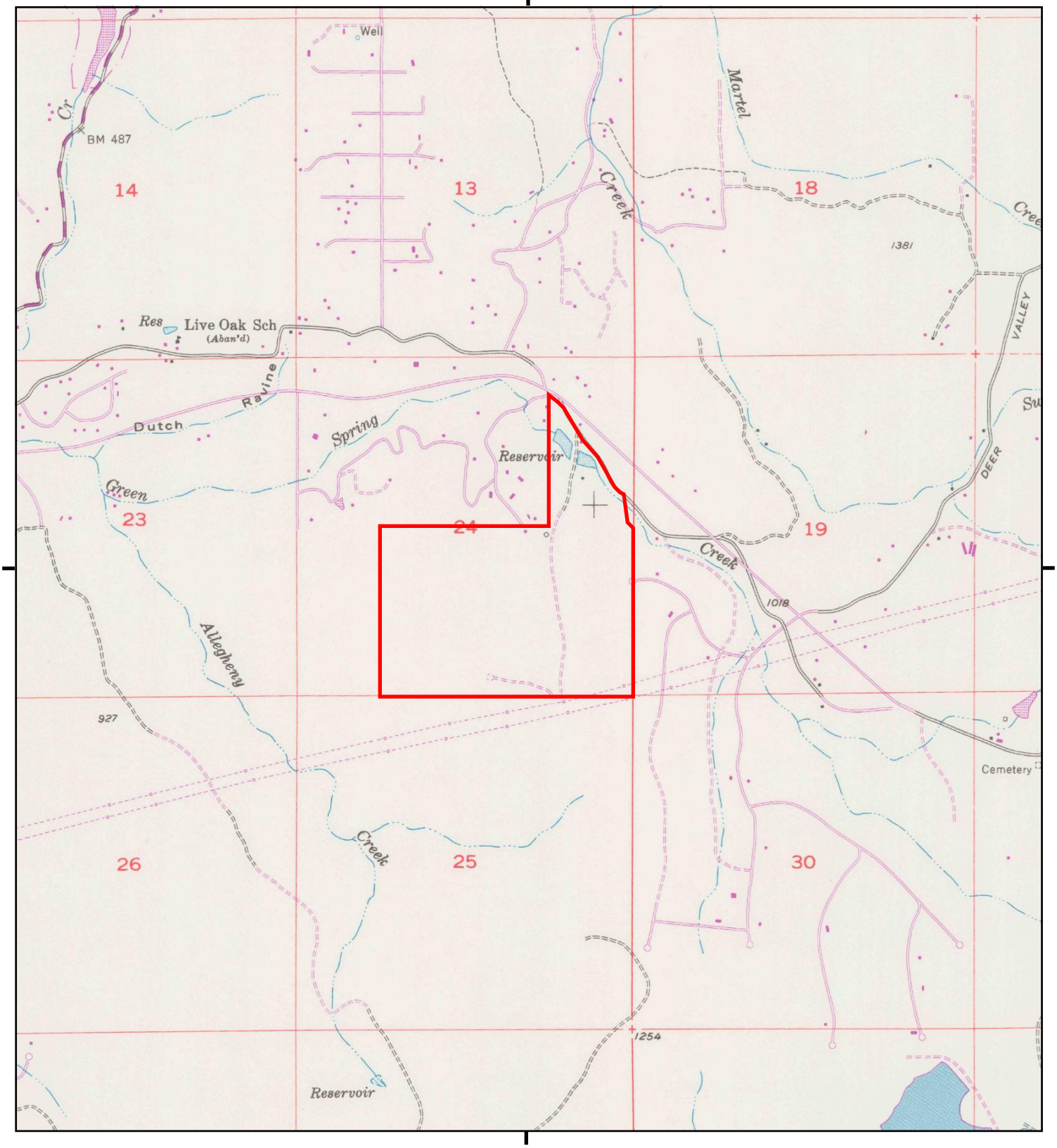
TP, Clarksville, 2012, 7.5-minute

SITE NAME: 3200 VERDE VALLE LN
ADDRESS: 3200 VERDE VALLE LN
EL DORADO HILLS, CA 95762
CLIENT: Terraphase Engineering Inc.

N

# Historical Topo Map

1980




This report includes information from the following map sheet(s).

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NW N NE
W E
SW S SE

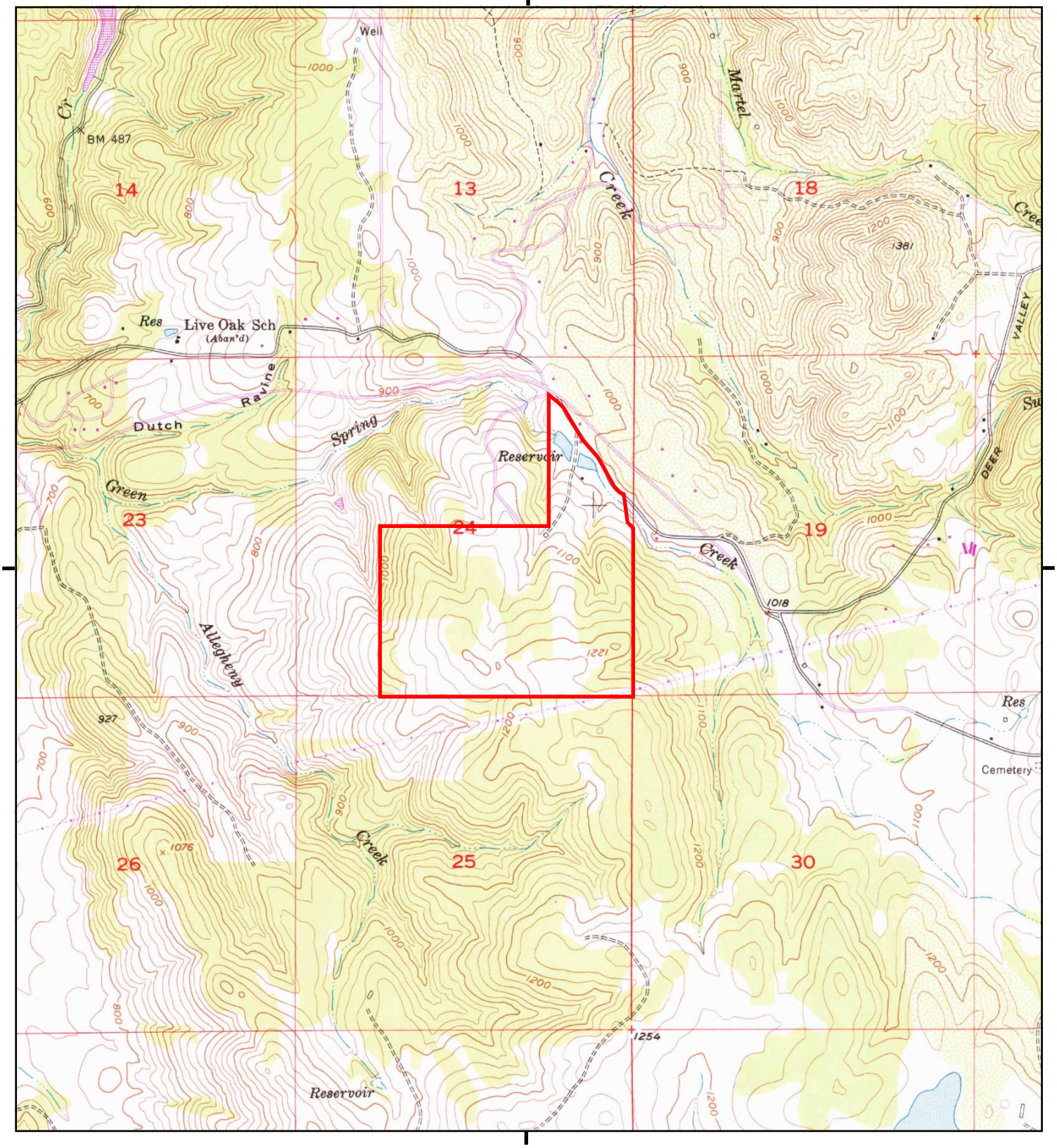
TP, Clarksville, 1980, 7.5-minute

SITE NAME: 3200 VERDE VALLE LN
ADDRESS: 3200 VERDE VALLE LN
EL DORADO HILLS, CA 95762
CLIENT: Terraphase Engineering Inc.

N

# Historical Topo Map

1973




This report includes information from the following map sheet(s).

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NW N NE
W E
SW S SE

TP, Clarksville, 1973, 7.5-minute

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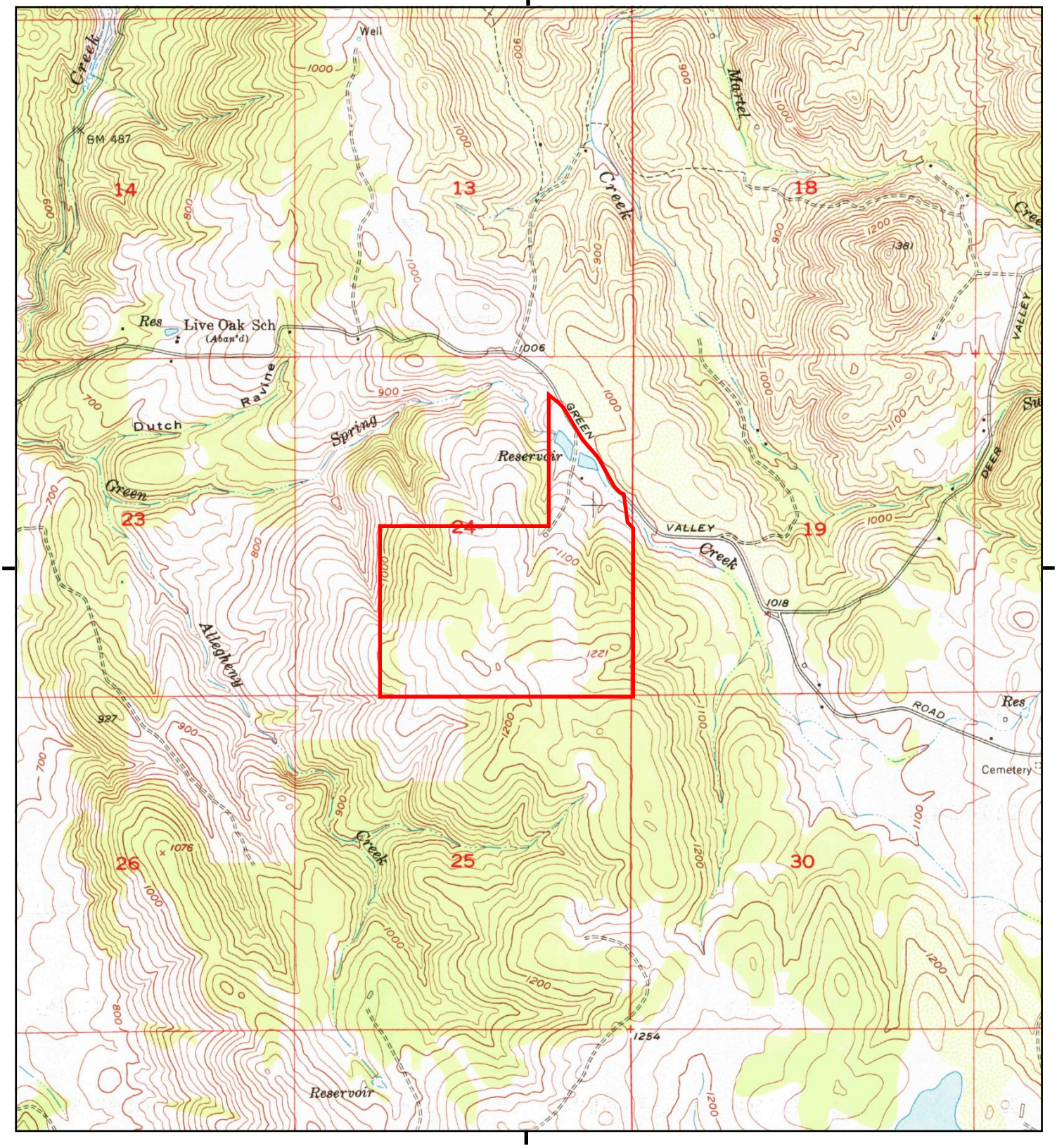
ADDRESS: 3200 VERDE VALLE LN
EL DORADO HILLS, CA 95762
CLIENT: Terraphase Engineering Inc.

N




This report includes information from the following map sheet(s).

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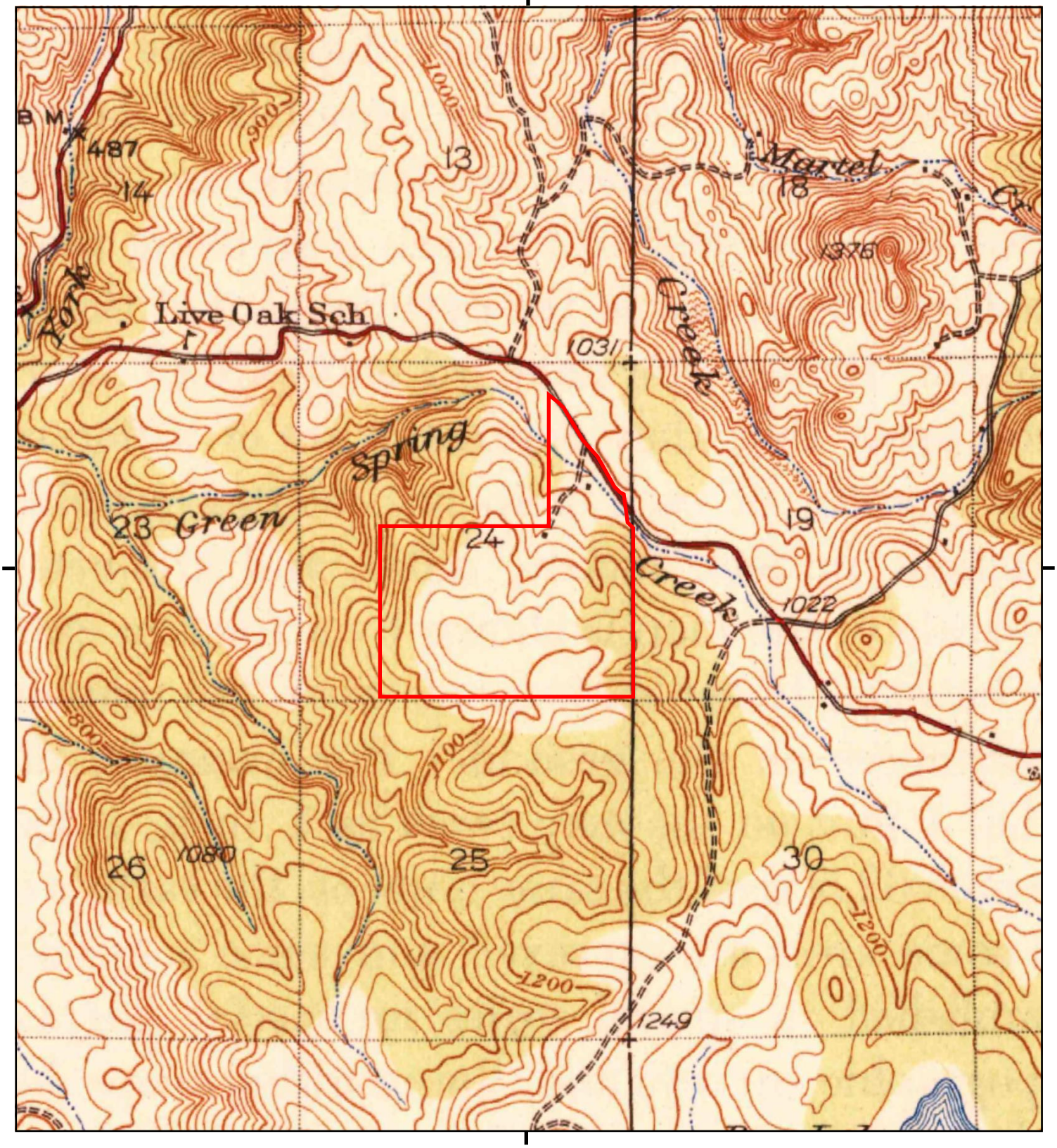
NW N NE
W E
SW S SE

TP, Clarksville, 1953, 7.5-minute

SITE NAME: 3200 VERDE VALLE LN
ADDRESS: 3200 VERDE VALLE LN
EL DORADO HILLS, CA 95762
CLIENT: Terraphase Engineering Inc.

N




This report includes information from the following map sheet(s).

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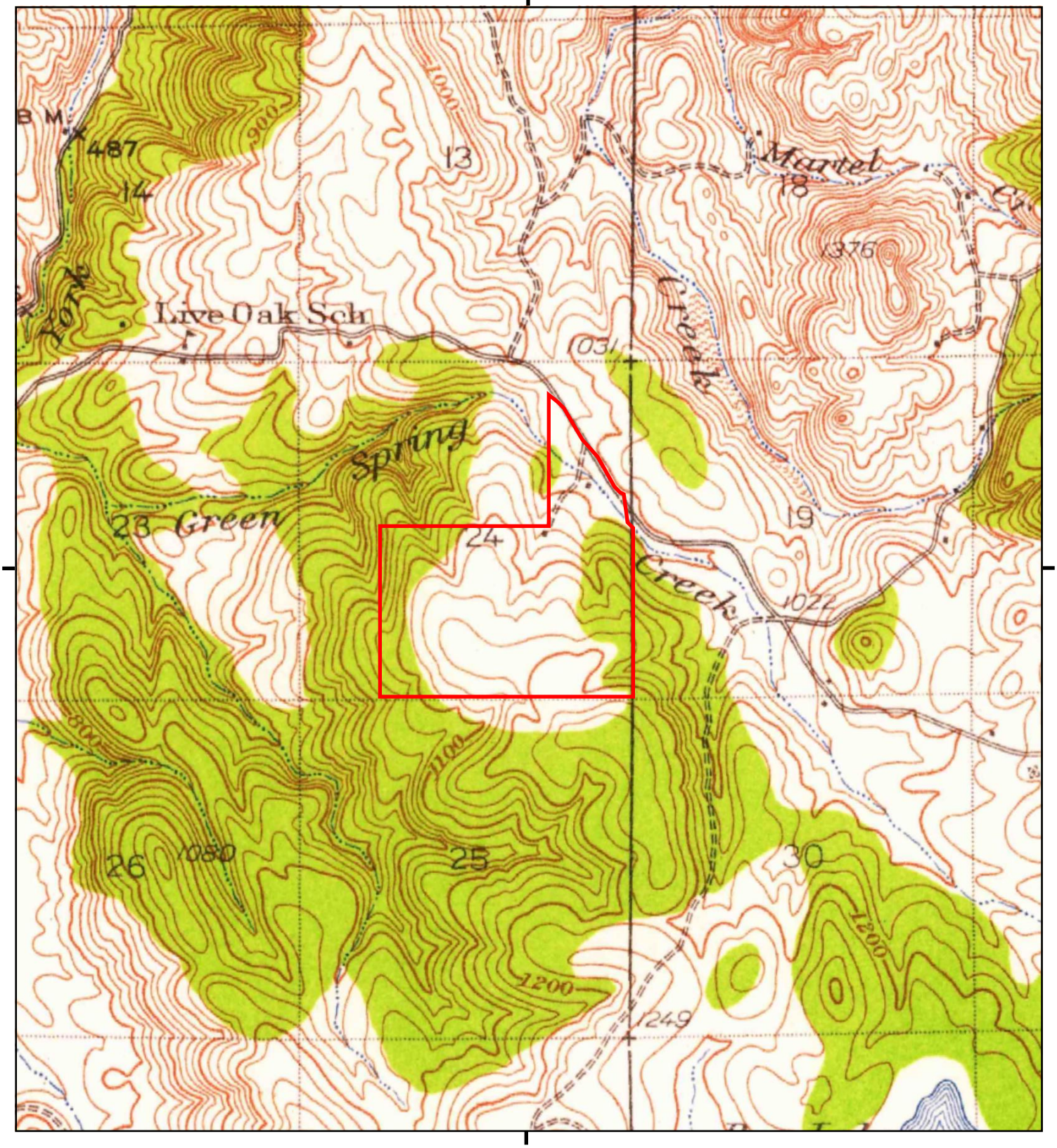
NW N NE
W E
SW S SE

TP, Folsom, 1944, 15-minute

SITE NAME: 3200 VERDE VALLE LN
ADDRESS: 3200 VERDE VALLE LN
EL DORADO HILLS, CA 95762
CLIENT: Terraphase Engineering Inc.

N




This report includes information from the following map sheet(s).

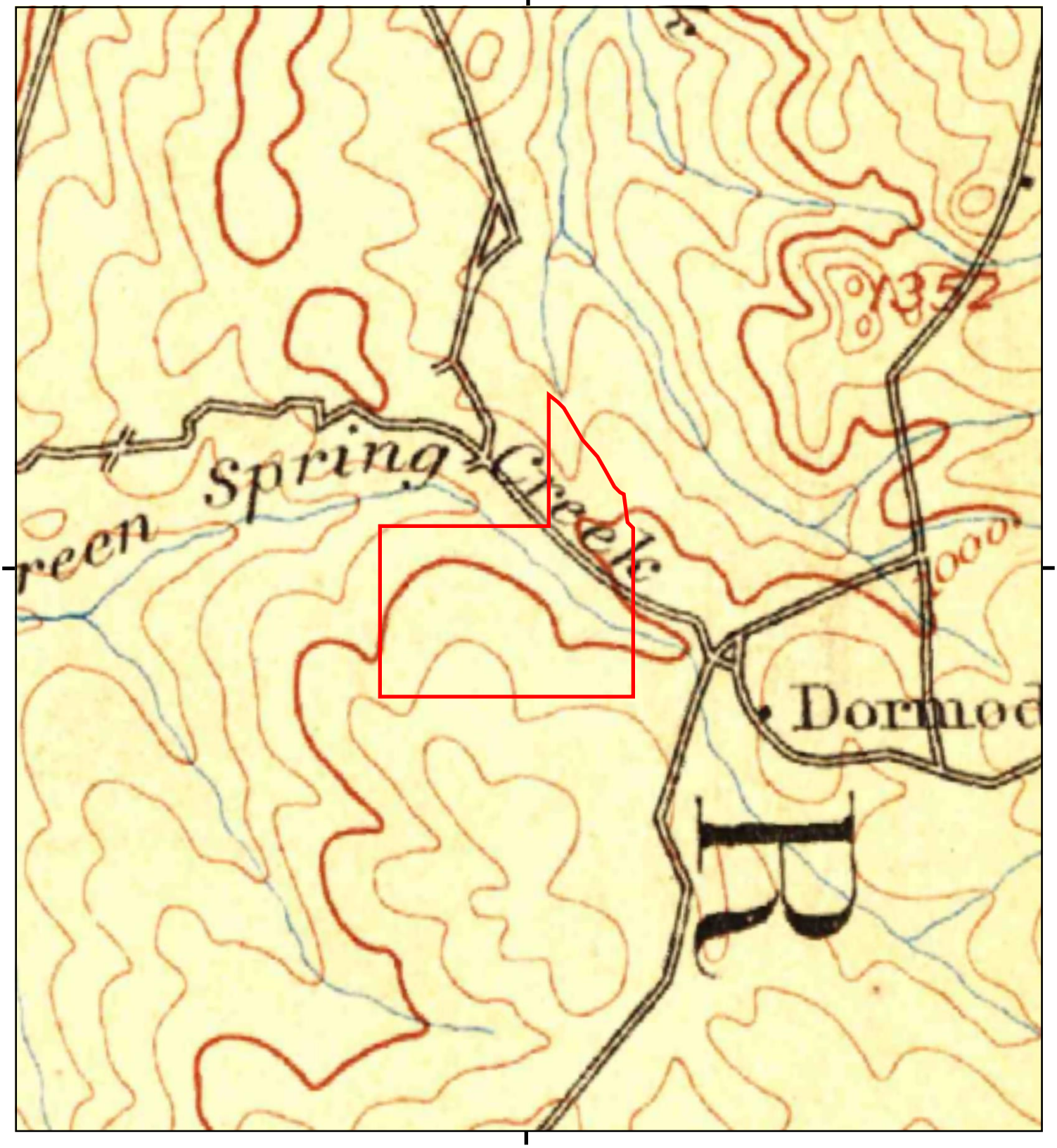
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Folsom, 1941, 15-minute

SITE NAME: 3200 VERDE VALLE LN
ADDRESS: 3200 VERDE VALLE LN
EL DORADO HILLS, CA 95762
CLIENT: Terraphase Engineering Inc.

N




This report includes information from the following map sheet(s).

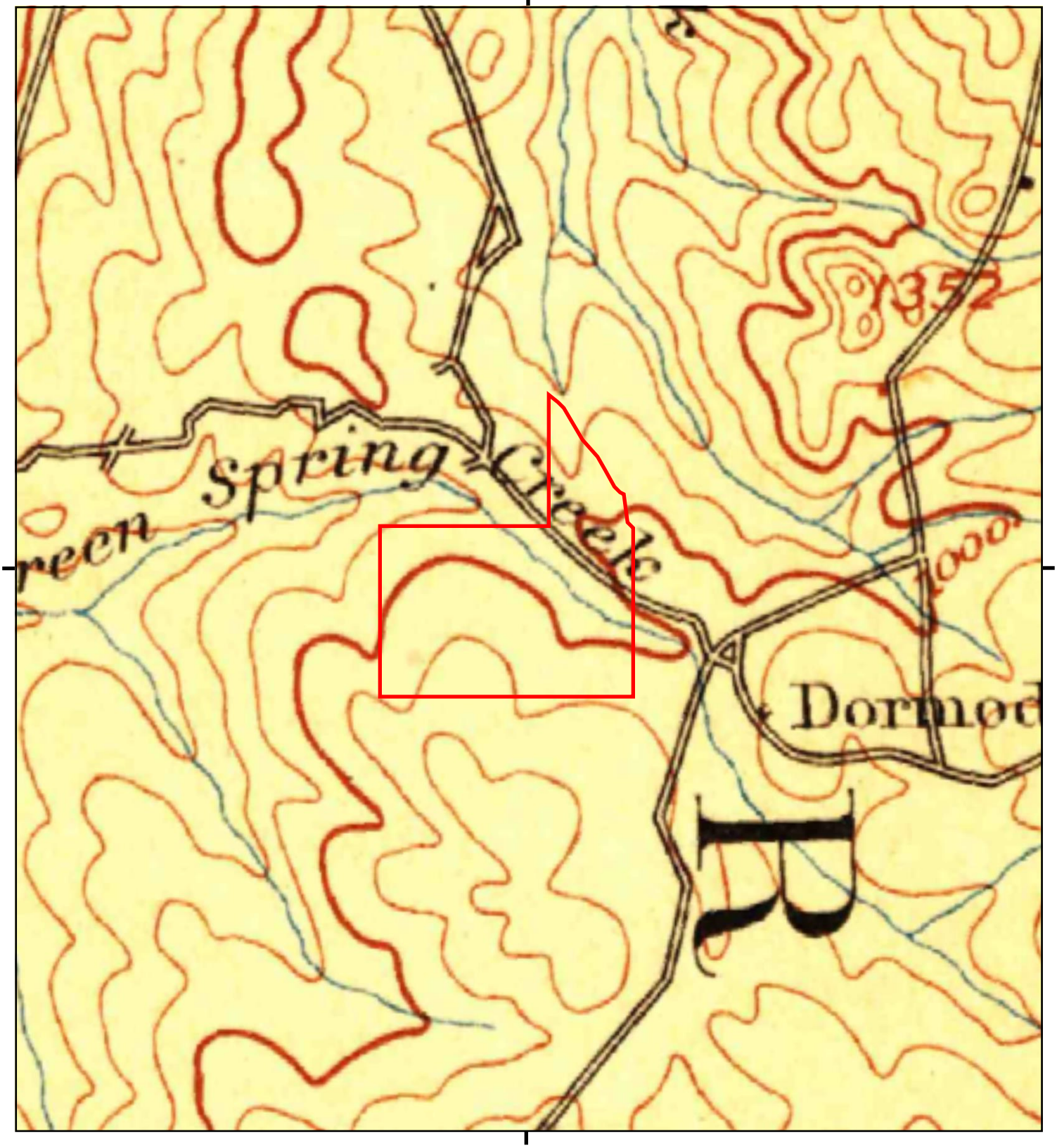
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Sacramento, 1893, 30-minute

SITE NAME: 3200 VERDE VALLE LN
ADDRESS: 3200 VERDE VALLE LN
EL DORADO HILLS, CA 95762
CLIENT: Terraphase Engineering Inc.

N




This report includes information from the following map sheet(s).

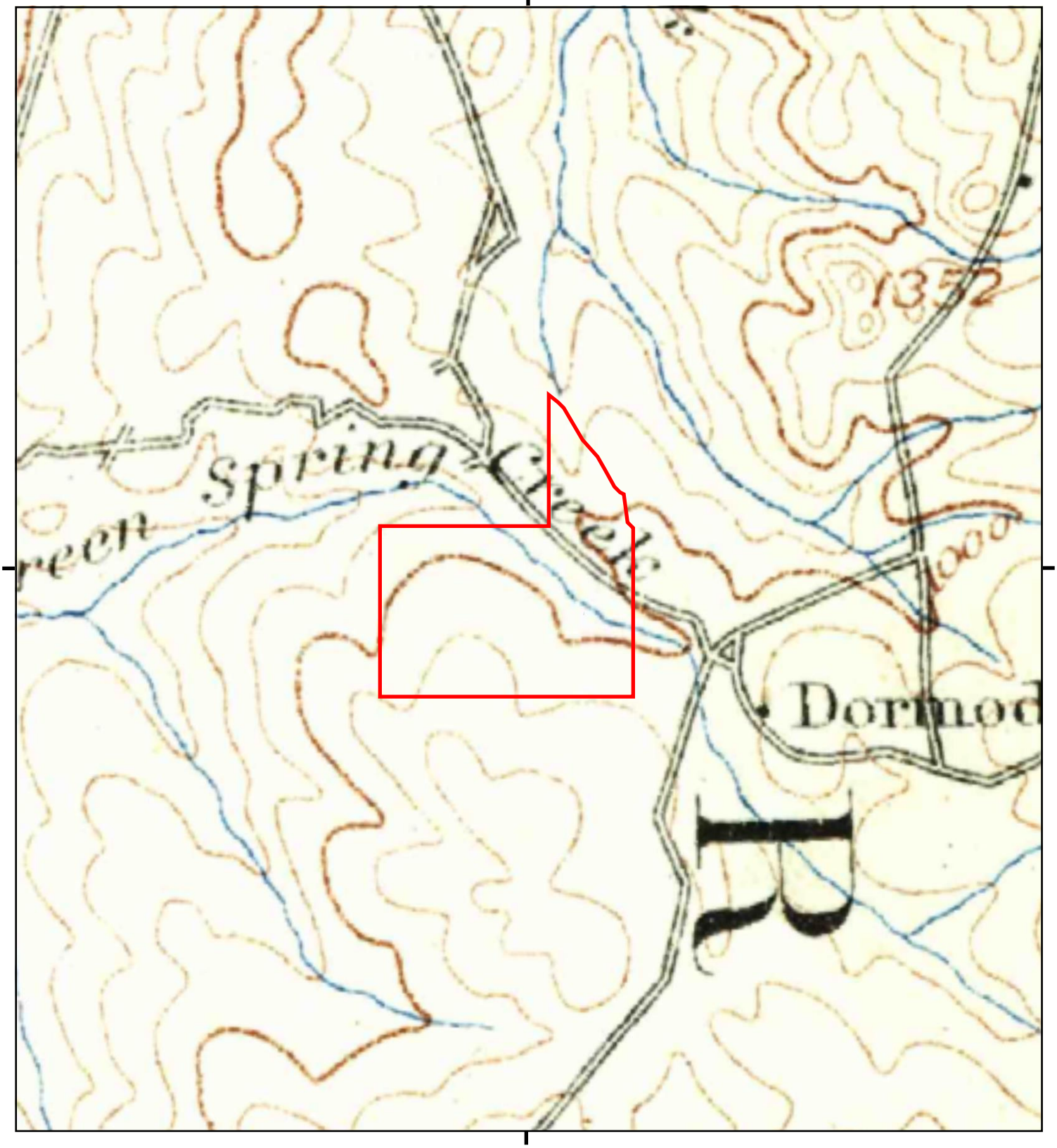
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Sacramento, 1892, 30-minute

SITE NAME: 3200 VERDE VALLE LN
ADDRESS: 3200 VERDE VALLE LN
EL DORADO HILLS, CA 95762
CLIENT: Terraphase Engineering Inc.

N




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Sacramento, 1891, 30-minute

SITE NAME: 3200 VERDE VALLE LN
ADDRESS: 3200 VERDE VALLE LN
EL DORADO HILLS, CA 95762
CLIENT: Terraphase Engineering Inc.

N

# Appendix G

## Prior Reports and Relevant Documentation

# PHASE I ENVIRONMENTAL SITE ASSESSMENT
# DIXON RANCH
# GREEN VALLEY ROAD
# EL DORADO HILLS, CALIFORNIA 95762

## EL DORADO COUNTY ASSESSOR PARCEL NUMBERS
## 126-150-13 (Vanderburg), 126-150-15 (Mikulaco), 126-150-23 (Louie), 126-020-02 (Louie), 126-020-03 (Louie), 126-150-21 (Norris), and 115-080-04 (Peters)

Prepared By

Youngdahl Consulting Group, Inc.
1234 Glenhaven Court
El Dorado Hills, California 95762

Prepared For

Dixon Ranch Partners, LLC
707 Commons Drive, Suite 103
Sacramento, California 95825

Project No. E11047.001
April 2011

YOUNGDAHL CONSULTING GROUP, INC.
Building Innovative Solutions
1234 Glenhaven Court, El Dorado Hills, Ca 95762
5750 Arabian Lane, Loomis, Ca 95650
ph 916.933.0633 fx 916.933.6482
www.youngdahl.net

Project No. E11047.001
12 April 2011

Dixon Ranch Partners, LLC
Mr. Joel Korotkin
707 Commons Drive, Suite 103
Sacramento, California 95825

Subject: **Phase I Environmental Site Assessment**
**Dixon Ranch, Green Valley Road, El Dorado Hills, California 95762**
**APNs: 126-150-13 (Vanderburg), 126-150-15 (Mikulaco), 126-150-23 (Louie), 126-020-02 (Louie), 126-020-03 (Louie), 126-150-21 (Norris), and 115-080-04 (Peters)**

Reference: 1. Proposal PE11-025; Prepared by Youngdahl Consulting Group, Inc.; Contract signed 15 February 2011 by Mr. Joel Korotkin with Dixon Ranch Partners, LLC.

Dear Mr. Korotkin:

As requested, Youngdahl Consulting Group, Inc. has performed a Phase I Environmental Site Assessment for the 450-acre mixed-use property, Dixon Ranch, located south and west of Green Valley Road in El Dorado Hills, El Dorado County, California for Dixon Ranch Partners, LLC (Figure 1 - Vicinity Map). The property is assigned El Dorado County Assessors Parcel Numbers (APNs): 126-150-13 (Vanderburg), 126-150-15 (Mikulaco), 126-150-23 (Louie), 126-020-02 (Louie), 126-020-03 (Louie), 126-150-21 (Norris), 115-080-04 (Peters) (subject property) and includes 450 acres of property used for rural residential, grazing, commercial storage, horse boarding, and agricultural (strawberries) purposes.

Our study consisted of a review of environmental record sources, physical setting sources, review of site related documents, historical use information, and a site reconnaissance. This assessment has not revealed evidence of recognized environmental conditions in connection with the subject property. No additional investigation is recommended. There is a potential for lead from lead paint and/or asbestos containing building materials to be present in the older structures on site. If residential development is planned, screening for these contaminants may be required by the local enforcement agency (LEA).

This Phase I Environmental Site Assessment has been completed in accordance to the ASTM Practice E 1527-05. Youngdahl Consulting Group, Inc. (YCG) declares that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in ASTM Practice E 1527-05 §312.10. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Very truly yours,
Youngdahl Consulting Group, Inc.

Reviewed by:

Laurie B. Israel, R.E.A.
Senior Environmental Scientist

David C. Sederquist, C.E.G., C.HG.
Senior Engineering Geologist/Hydrogeologist

Distribution: Dixon Ranch Partners, LLC, Mr. Joel Korotkin, 3 copies

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**PHASE I ENVIRONMENTAL SITE ASSESSMENT**
**DIXON RANCH**
**GREEN VALLEY ROAD**
**EL DORADO HILLS, CALIFORNIA 95762**

**EL DORADO COUNTY ASSESOR PARCEL NUMBERS**
**126-150-13 (Vanderburg), 126-150-15 (Mikulaco), 126-150-23 (Louie), 126-020-02 (Louie), 126-020-03 (Louie), 126-150-21 (Norris), and 115-080-04 (Peters)**

## EXECUTIVE SUMMARY

The subject property, Dixon Ranch, is 450 acres of mixed use property located south and west of Green Valley Road in El Dorado Hills, El Dorado County, California. The subject property is assigned seven El Dorado County Assessor's Parcel Numbers (APNs): 126-150-13 (Vanderburg), 126-150-15 (Mikulaco), 126-150-23 (Louie), 126-020-02 (Louie), 126-020-03 (Louie), 126-150-21 (Norris), 115-080-04 (Peters). This report was prepared for Dixon Ranch Partners, LLC. The subject property is located in Section 24, Township 10 North, Range 8 East and Section 19, Township 10 North, Ranch 9 East, El Dorado County, California. The subject property is owned by the following entities: Vanderburg, Mikulaco, Louie, Norris, and Peters. The subject property is currently mixed use: rural residential, grazing land, and agricultural (strawberry fields).

- Parcel 126-150-13 (Vanderburg) is undeveloped land historically used for horse grazing.
- Parcel 126-150-15 (Mikulaco) is currently rural residential property historically used as grazing land.
- Parcel 126-150-23 (Louie) is currently includes the historic Dixon Ranch, grazing land, a strawberry field, and two old fuel tanks stored on the soil surface west of the strawberry field. The contents of the two fuel tanks are unknown. According to the County of El Dorado Agricultural Commissioner, strawberry fields do not use "legacy" chemicals that persist over time in the soil.
- Parcels 126-020-02 (Louie) and 126-020-03 (Louie) are used for cattle grazing.
- Parcel 126-150-21 (Norris) is undeveloped land with a water well.
- Parcel 115-080-04 (Peters) is an agricultural dump site with swimming pool spoils to depths of 30-40 feet. Mr. Peters was issued a permit violation for receiving pools spoils after the permit had expired. The 500-gallon aboveground fuel tank has been empty for six years and has only been filled twice, once with gasoline and once with diesel. Mr. Peters stated that the tank has never leaked and no fuel spills have occurred at the tank's location. The northern half is used for strawberry fields. According to the County of El Dorado Agricultural Commissioner, strawberry fields do not use "legacy" chemicals that persist over time in the soil. The central portion is used by the current tenant, Erik Landscaping of Cameron Park, for storage and staging.

Green Spring Creek traverses through the northeastern portion of the subject property flowing north and west towards Folsom Lake. The subject property is covered with native plants and oak trees. Bisecting the subject property is the contemporary Dixon family residential property. Adjacent to the west is a residential subdivision. Adjacent property to the east includes Green Valley Road and rural residential property. Adjacent property to the north, south, and west includes rural residential property.

It is the opinion of the Youngdahl Consulting Group Inc.'s environmental professional that no identified recognized environmental conditions were identified during this investigation of the subject property. No further investigation is required. It is recommended that the three fuel tanks located on the subject property be cleaned, transported, and disposed of following regulatory procedures.

There is a potential for lead from lead paint and/or asbestos containing building materials to be present in the older structures on site. If residential development is planned, screening for these contaminants may be required by the local enforcement agency (LEA).

## 1.0 INTRODUCTION

This report presents the results of the Phase I Environmental Site Assessment (ESA) performed for 450 acres of mixed use property located south and west of Green Valley Road in El Dorado Hills, El Dorado County, California (subject property). The subject property is located in Section 24, Township 10 North, Range 8 East and Section 19, Township 10 North, Ranch 9 East, El Dorado County, California (Figure 1). The property is assigned El Dorado County Assessor's Parcel Numbers (APNs): 126-150-13 (Vanderburg), 126-150-15 (Mikulaco), 126-150-23 (Louie), 126-020-02 (Louie), 126-020-03 (Louie), 126-150-21 (Norris), 115-080-04 (Peters).

This report is intended for the use of Dixon Ranch Partners, LLC. The users of this report, Dixon Ranch Partners, LLC and all "intended users", other potential purchasers of the subject property, and funders in relation to the transaction(s) may rely on the information contained herein for all purposes in connection with making a loan secured by, or investment in, the subject property as contemplated pursuant to the Contract dated 18 February 2011, by and between the Dixon Ranch Partners, LLC and Youngdahl Consulting Group, Inc. All such "intended users" of the Phase I ESA shall be allowed to rely upon the Phase I ESA to the same extent as Dixon Ranch Partners, LLC. This report is valid as of the date stated on the document; the report should not be relied upon for information concerning changes in the condition of the property after the report was prepared.

### 1.1 Purpose

This Phase I ESA was conducted according to the American Society for Testing and Materials (ASTM) Designation E1527-05 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM Phase I Standards). The ASTM E1527-05 standard is consistent with the requirement of the All Appropriate Inquiry (AAI) rule in Title 40 of the Code of Federal Regulations (40 C.F.R. § 312). The ASTM practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability. The purpose of this Phase I ESA was to identify recognized environmental conditions which may affect the property. Recognized environmental conditions are defined in the ASTM Phase I Standards to mean "the presence or likely presence of any hazardous substances or petroleum products on the property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substance or petroleum product into structures on the property or into the ground, groundwater, or surface water of the property." The term recognized environmental condition is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions.

Controlled substances (i.e. illicit drugs) are not included within the scope of this standard. Petroleum products are included within the scope of this practice because they are of concern with respect to many parcels of commercial real estate and current custom and usage is to include an inquiry into the presence of petroleum products when doing an ESA of commercial real estate. This practice does not address requirements of any state or local laws or of any federal laws other than the appropriate inquiry provisions of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)'s landowner liability protection. Users are

cautioned that federal, state, and local laws may impose environmental assessment obligations that are beyond the scope of this practice. Users should also be aware that there are likely to be other legal obligations with regard to hazardous substances or petroleum products discovered on the property that are not addressed in this practice and that may pose risks of civil and/or criminal sanctions for non-compliance. The scope of this practice includes research and reporting requirements that support the user's ability to qualify for landowner liability protection. As such, sufficient documentation of all sources, records, and resources utilized in conducting the inquiry required by this practice must be provided in the written report.

**1.2 Detailed Scope of Services**

This scope of services is site specific in that it relates to assessment of environmental conditions on a specific parcel of commercial real estate. The Phase I ESA will be performed by an environmental professional. An environmental professional (EP) is defined as a person meeting the education, training, and experience requirements set forth in 40 CFR § 312.10(b). We declare that, to the best of our professional knowledge and belief, we meet the definition of an Environmental Professional (EP). The scope of services for this Phase I ESA is as follows:

Government Records Review: Standard environmental record sources, including Federal, Tribal, and State lists as well as local sources of environmental records were reviewed. We authorized Environmental Data Resources (EDR), to conduct a search of specified government databases and produce a map-based radius search report which would identify sites within the approximate minimum distances pursuant to the ASTM E1527-05 Standard. A current USGS 7.5 Minute Topographic Map showing the area on which the property is located was reviewed.

Review of Historical Sources: Historical records that may have been reviewed include, but are not limited to, aerial photographs, fire insurance (Sanborn®) maps, building department records, chain-of-title documents, city directory abstracts, land use records, and USGS Topographic Maps. The AAI rule requires that historical documents be reviewed as far back in time as the property contained structures or the property was used for agricultural, residential, commercial, industrial, or governmental purposes. Under the AAI rule, historical sources of information must be reviewed as far back as 1940. The AAI rule does not specify a research interval for reviewing historical records.

Site Reconnaissance: A site reconnaissance visit was conducted on 3 March 2011 by Ms. Laurie Israel with Youngdahl Consulting Group, Inc.

Interviews: Prior to the site visit, the Client was asked to identify a person with good knowledge of the property (the key site manager). The Phase I ESA Questionnaires completed by the Owner or representative are provided in Appendix A. The AAI rule requires interviews be conducted with the current owner(s) and occupant(s) of the subject property. The AAI rule also requires that additional interviews be conducted with current and past facility managers, past owners, operators or occupants of the property, and past employees, as necessary to meet the objectives of the AAI rule. The AAI rule allows the environmental professional to determine whether such interviews are necessary.

Identify Data Gaps: If data failure is encountered, the report shall document the failure and, if any of the standard historical sources were excluded, the environmental professional will give the reasons for their exclusion. If data failure represents a significant data gap, the report shall comment on the impact of the data gap on the

ability of the environmental professional to identify recognized environmental conditions. If the data gaps are found, the Environmental professional can and does not warrant nor guarantee that no significant events, releases, or conditions arose during the periods of such data gaps.

Evaluation and Report Preparation: The findings, opinions, and conclusions in the Phase I ESA report are supported by documentation. The report: (1) describes all services performed; (2) has a findings section which summarizes known or suspect environmental conditions associated with the property, and which may include recognized environmental conditions, historical recognized environmental conditions, and de minimis conditions; (3) includes Youngdahl Consulting Group Inc.'s opinion(s) of the impact on the property of the known or suspect environmental conditions identified in the findings section as well as the logic and reasoning used in evaluating information collected during the course of the investigation; and (4) includes a conclusions and recommendations section that summarizes the recognized environmental conditions connected with the property and presents recommendations to address those conditions. The report will include an analysis of the relationship of the purchase price of the subject property to the fair market value of the property, if it were not contaminated.

Report Shelf Life: Under the AAI rule, a prospective property owner may use a Phase I ESA Report without having to update any information collected as part of the inquiry: (1) if the all appropriate inquiries investigation was completed less than 180 days prior to the date of acquisition of the property or (2) if the Phase I ESA report was prepared as part of a previous all appropriate inquiries investigation and was completed less than 180 days prior to the date of acquisition of the property. A prospective property owner may use a previously conducted Phase I ESA Report: (1) if the Phase I ESA report was prepared as part of a previous all appropriate inquiries investigation for the same property; and (2) if the information was collected or updated within one year prior to the date of acquisition of the property; and (3) certain aspects of the previously conducted report are conducted or updated within 180 days prior to the date of acquisition of the property. These aspects include the interviews, on-site visual inspection, the historical records review, the search for environmental liens, and the declaration by the EP responsible for the assessment or update.

**1.3 Significant Assumptions**

This report and review of the subject property is limited in scope. All appropriate inquiry does not mean an exhaustive assessment of a clean property. There is a point at which the cost of information obtained or the time required to gather it outweighs the usefulness of the information and, in fact, may be a material detriment to the orderly completion of transactions. One of the purposes of the ASTM E1527-05 practice is to identify a balance between the competing goals of limiting the costs and time demands inherent in performing an ESA and the reduction of uncertainty about unknown conditions resulting from additional information. The appropriate level of inquiry will be guided by the type of property subject to assessment, the expertise and risk tolerance of the user, and the information developed in the course of the inquiry. This type of investigation is undertaken with the risk that the presence, full nature, and extent of contamination would not be revealed by visual observation and review of available data alone. The findings presented in this report were based on field observations and review of available data. Therefore, the data obtained is clear and accurate only to the degree implied by the sources and methods used. The information presented herewith was based on professional interpretation and on the data obtained.

**1.4 Limitations and Exceptions**
The ASTM E1527-05 Practice lists 14 items that are non-scope items that persons may want to assess in connection with commercial real estate. Radon is a non-scope item and a review of regional radon values was performed as part of this study.

**1.5 Special Terms and Conditions and/or Additional Services**
A Phase I ESA meeting or exceeding the ASTM E1527-05 practice and completed less than 180 days prior to the date of acquisition (the date on which a person acquires title to the subject property) or the date of the intended transaction is presumed to be valid. If within this period the assessment will be used by a different user than the user for whom the assessment was originally prepared, the subsequent user must also satisfy the User's Responsibilities set forth in Section 1.6. Users and environmental professionals may use information in prior environmental site assessments provided such information was generated as a result of procedures that meet or exceed the requirements of ASTM E1527-05.

**1.6 User Responsibilities**
The user should provide reasonably ascertainable land title records and judicial records for review for the existence of environmental liens or activity and use limitations (AUL), if any, that are currently recorded against the property. AULs are an explicit recognition by a federal, tribal, state, or local regulatory agency that residual levels of hazardous substances or petroleum products may be present on a property, and that unrestricted use of the property may not be acceptable. If the user is aware of any specialized knowledge or experience that is material to recognized environmental conditions in connection with the property, it is the user's responsibility to communicate any information based on such specialized knowledge or experience in the EP, and before the site reconnaissance is conducted. In a transaction involving the purchase of a parcel of commercial real estate, the user shall consider the relationship of the purchase price of the property to the fair market value of the property if the property was not affected by hazardous substances or petroleum products. The user should try to identify an explanation for a lower price which does not reasonably reflect fair market value if the property were not contaminated, and make a written record of such explanation. If the user is aware of any commonly known or reasonable ascertainable information within the local community about the property that is material to recognized environmental conditions in connection with the property, it is the user's responsibility to communicate such information to the environmental professional before the site reconnaissance is conducted.

**2.0 PROPERTY DESCRIPTION**
The property description referred to herein is based on a parcel map and on a site reconnaissance visit performed by Youngdahl Consulting Group, Inc. The subject property to the south and west of Green Valley Road is assigned El Dorado County APNs: 126-150-13 (Vanderburg), 126-150-15 (Mikulaco), 126-150-23 (Louie), 126-020-02 (Louie), 126-020-03 (Louie), 126-150-21 (Norris), and 115-080-04 (Peters).

The subject property is situated in Section 24, Township 10 North, Range 8 East and Section 19, Township 10 North, Ranch 9 East of the Mount Diablo Base and Meridian (M.D.B.& M.), El Dorado County, California (Figure 1, Vicinity Map and Figure 2, Site Plan). The subject property is currently mixed use land used as rural residential, grazing land, and agricultural (strawberry fields) property. Bisecting the subject property is the contemporary Dixon family residential property. Adjacent to the west is a residential subdivision. Adjacent property to the east includes Green Valley Road and rural residential property. Adjacent property to the north, south, and west includes rural residential property.

## 3.0 USER PROVIDED INFORMATION

### 3.1 Title Records
Title records were not provided for review

### 3.2 Environmental Liens or Activity and Use Limitations
No environmental liens or other activity and use limitations were found by EDR during their lien search (Section 5.3.4).

### 3.3 Specialized Knowledge and Commonly Known or Reasonably Ascertainable Information
The existence of specialized knowledge was not identified in the completed questionnaires (Appendix A).

### 3.4 Valuation Reduction for Environmental Issues
Based on the completed questionnaires (Appendix A), the purchase price or appraised value of the property is not significantly less than comparable properties in the vicinity.

### 3.5 Reasons for Performing the Phase I
The buyer, Dixon Ranch Partners, LLC, requested the completion of the Phase I ESA per ASTM E1527-05 to satisfy due diligence requirements.

## 4.0 INTERVIEWS
Telephone conversation records and completed Phase I ESA Questionnaires are provided in Appendix A.

### 4.1 Interviews with Owners and/or Occupants
Vanderburg Parcel 126-150-13: Mr. Lee Vanderburg completed a Phase I ESA Questionnaire and provided additional information by telephone on 1 March 2011. Mr. Vanderburg stated that his residential property's address is 1768 Green Valley Road. The parcel has historically been used for residential purposes and for horse grazing according to Mr. Vanderburg. Mr. Vanderburg indicated on the questionnaire that old fuel tanks are stored on the soil surface on the adjacent Louie parcel 126-150-23.

Mikulaco Parcel 126-150-15: Mr. Paul Mikulaco completed a Phase I ESA Questionnaire and provided additional information during the site visit. Mr. Mikulaco stated that the addresses of the duplex units on the property are 1838 and 1840 Green Valley Road. Mr. Mikulaco lives in one of the duplex units and the other one is rented out to a friend of Mr. Mikulaco. According to Mr. Mikulaco, there is one 250-foot-deep domestic well on his property and two 1,000-gallon septic tanks. Mr. Mikulaco noted that the strawberry field northwest of the duplex is farmed organically. Mr. Mikulaco answered "No" to all of the questions on the Phase I ESA Questionnaire.

Louie Parcels 126-150-23, 126-020-02, 126-020-03: Mr. Louie is an absentee owner and has no knowledge of the historical use of the parcels. Mr. Richard Klingensmith, caretaker and long-time tenant at the historic Dixon Ranch, was identified as a knowledgeable person. Mr. Klingensmith completed a Phase I ESA Questionnaire and provided additional information during the site visit. Mr. Klingensmith noted that two old fuel storage tanks are located adjacent to the strawberry field on parcel 126-150-23.

Norris Parcel 126-150-21: Mr. Bill Norris completed a Phase I ESA Questionnaire and provided additional information by telephone on 1 March 2011. Mr. Norris stated that the property was

graded and a domestic well installed for residential development; however, the property remains undeveloped. Mr. Norris answered "No" to all of the questions on the Phase I ESA Questionnaire.

Peters Parcel 115-080-04: Mr. Michael Peters completed a Phase I ESA Questionnaire and provided additional information by telephone on 31 March 2011. Mr. Peters stated that he purchased the property in 1996. In approximately 2006, Mr. Peters applied for and was granted an agricultural dump site permit and swimming pool spoils were deposited on the property. Mr. Peters stated that only clean material from residential swimming pool construction firms was brought onto the subject property. Additionally, large rocks deposited on site from the swimming pool excavations were sold to local landscaping firms. According to Mr. Peters, approximately 30-40 feet of clean fill material was deposited on the property. This material capped the naturally occurring asbestos present onsite. Mr. Peters permit expired; however, since pool spoils continued to be deposited on site, Mr. Peters was issued a permit violation by El Dorado County. When asked about the aboveground fuel tank observed on the property during the site visit, Mr. Peters stated that he owns the 500-gallon tank and that it has been empty for six years. Mr. Peters noted that the tank has only been filled twice, once with gasoline and once with diesel. Mr. Peters stated that the tank has never leaked and no fuel spills have occurred at the tank's location. Currently the parcel is occupied by a tenant, Erik Landscaping of Cameron Park. The site is also being used to grow strawberries. Mr. Peters answered "Yes" to Question 16, the existence of environmental violations, on the Phase I ESA Questionnaire. Mr. Peters said that this "Yes" response is in reference to the permit violation for the swimming pool spoils.

### 4.2 Interviews with State and/or Local Government Officials

Mr. Todd Lenkin with El Dorado County Environmental Management was contacted for information. Mr. Lenkin did not find any files for the subject property.

The subject property is currently being used for agricultural (strawberry fields) purposes. According to the County of El Dorado Agricultural Commissioner, strawberry fields do not use "legacy" chemicals that persist over time in the soil.

The subject property does not have a physical address; therefore, it is not possible for site specific files to be researched for the subject property. The State of California Water Resources Control Board GeoTracker website was researched for information and the current status of sites in the vicinity of the subject property under investigation. According to GeoTracker, there are no sites under investigation in the vicinity of the subject property.

## 5.0 RECORDS REVIEW

The records review consisted of a review of reasonably ascertainable environmental record sources, physical setting sources, and historical use information that will help identify recognized environmental conditions in connection with the property. Reasonably ascertainable record information must be publicly available, obtainable from its source within reasonable time and cost constraints, and be practically reviewable.

### 5. 1 Standard Environmental Record Sources

A commercial database search of Federal, Tribal, State, and Local regulatory lists was conducted in order to assess whether documented environmental conditions exist on or near the property. In an effort to fulfill due diligence requirements, Youngdahl Consulting Group, Inc. employed the services of Environmental Data Resources, Inc. (EDR) to identify sites listed on regulatory agency databases within approximate minimum search distances from the subject

property with potential of existing environmental problems. The term approximate minimum search distances means the distances within the area which government records must be reviewed pursuant to ASTM Phase I Standards. The term minimum search distance is used in lieu of radius as to include irregularly shaped properties. The EDR Radius Map with GeoCheck® (EDR Report) was provided by EDR on 1 March 2011 (Appendix B). Included in the report are the dates the original government sources were updated and the dates the sources were last updated by EDR, as well as a list of acronyms used by EDR. The subject property was not identified in the EDR Report. Listed sites within the minimum search distances include: 1 ENVIROSTOR, 2 NPDES sites, and 1 HAZNET site. The Envirostor site, Sanford Ranch (2321 Green Valley Road), is identified with a status date of November 1994. The two NPDES sites (2070 W Green Springs Road and 1801 Green Valley Road) are listed for storm water construction violations. The HAZNET site (3141 Valley Valle Lane) is listed as having generated 0.1042 tons of oil/water separation sludge. A date was not provided. These listed sites do not appear to present a significant potential to impact the subject property.

Due to poor or inadequate information, EDR is unable to map certain sites. These sites are referred to by EDR as Orphans. None of these Orphan sites appear to be within the minimum search distances from the subject property. According to the EDR Report, the subject property is not designated as a wetland, per the National Wetlands Inventory (1994).

**5.2 Physical Setting Source(s)**
Geologic maps and a current U.S.G.S. 15 Minute Topographic Map of the Clarksville, California Quadrangle, as well as observations made during our site reconnaissance were used to make interpretations regarding the physical setting of the subject property and the surrounding area. The property's elevation ranges from approximately 920 to 1,221 feet above sea level. The topography of the property is variable.

**5.2.1 Regional Geology**
The subject property is located in northern California and in the western portion of the Sierra Nevada Foothills. According to the Mineral Land Classification of the Folsom 15-minute Quadrangle (CDMG publication OFR 84-50), the property is underlain by ultramafic rock and metavolcanic rock of the Foothill Melange.

In Youngdahl Consulting Group, Inc.'s experience, groundwater in the vicinity of the subject property is controlled by rock fractures and topography. Groundwater generally flows along the fractures with depths and directions controlled by topography. Groundwater depths vary from near surface (springs) to several hundreds of feet below ground surface. Records were not found regarding the depth to groundwater within the general vicinity of the subject property during a search of the California Department of Water Resources (DWR) Water Data Library.

The Soil Survey of El Dorado County (1974) notes the subject property to consist predominately of two soil types, Auburn very rocky silt loam, 2 to 30 percent slopes (mapped as unit AxD) and Auburn silt loam, 2 to 30 percent slopes (mapped as unit AwD). These soils are well drained and are underlain by hard metamorphic rocks at a depth of 12 to 26 inches. These soils are undulating to very steep on foothills. The easternmost portion of the subject property is identified as Delpiedra very rocky loam, 3 to 50 percent slopes (mapped as unit DeE) and Serpentine rock land (mapped as unit SaF). Delpiedra very rocky loam is gently sloping with outcrops of bedrock that cover 5 to 25 percent of the surface. Serpentine rock land is in areas of highly resistant serpentine and other ultrabasic rock formations. Rock outcrops and stones make up from 50 to 90 percent of the surface.

### 5.2.2 Regional Radon Values

Elevated radon gas levels in indoor air are a result of radon moving into buildings from the soil, either by diffusion or flow due to air pressure differences. The ultimate source of radon gas in buildings is the uranium naturally present in rock, water, and soil. Some rock types are known to contain more uranium than others. In California, most uranium deposits are relatively small in aerial extent and are located in rural areas. Consequently, the chance of severe radon levels (>200 pCi/L) occurring in buildings in California should be very low. The following rock units in California contain uranium in concentrations above the crustal average: the Monterey Formation, asphaltic rocks, marine phosphatic rocks, granitic rocks, felsic volcanic rocks, and certain metamorphic rocks. According to EPA publication 402-R-93-025, entitled EPA's Map of Radon Zones, California, dated September 1993, El Dorado County is shown to be in Zone 2. Zone 2 has a predicted average radon screening level of between greater than 2 Pico Curies per Liter (pCi/l) to less than 4 pCi/l. This is considered to be a moderate value of geologic radon potential.

### 5.3 Historical Use Information on the Property and Adjoining Properties

All obvious uses of the property shall be identified from the present, back to the property's first developed use, or back to 1940, whichever is earlier. The term developed use includes agricultural uses and placement of fill dirt. Standard historical sources shall be reviewed at approximately five year intervals. Uses in the area surrounding the property shall also be identified. Standard historical sources include: aerial photographs, fire insurance maps, property tax files, recorded land title records, USGS topographic maps, local street directories, building department records, and zoning/land use records. There are no Sanborn Maps that cover the subject property.

### 5.3.1 Aerial Photographic Review

Aerial photographs for the years 1953, 1961, 1973, 1984, 1993, 1998, and 2005 were provided in the EDR Aerial Photo Decade Package, a copy of which is provided in Appendix B. The 1937 and 1952 aerial photograph from Youngdahl Consulting Group, Inc.'s collection were also reviewed. Interpretations were made in an effort to evaluate former uses of the subject property and adjacent areas, and to determine if any significant topographic or cultural changes have occurred. A summary of the photographs reviewed is provided in Table 1.

The **1937** and **1952** aerial photographs provide coverage of the western portion of the subject property only. These photographs show the subject property and adjacent property to be undeveloped land.

The **1953** and **1961** aerial photographs show the subject property to be predominantly undeveloped land. There are indications of development in the northeastern portion of the property. Two dammed reservoirs are present west of Green Valley Road and structures are present to the southeast of the reservoirs. There are no developed properties adjacent to the subject property.

The **1973** and **1984** aerial photographs show the subject property and adjacent property to be similar to what was observed on the 1961 aerial photograph with the addition of residential development on parcel 126-150-15 (Mikulaco). Green Springs Drive is present to the west.

The **1993** aerial photograph shows the subject property to be similar to what was observed on the 1973 aerial photograph, with the addition of residential development on parcel 126-150-13 (Vanderburg). Parcel 126-150-21 (Norris) appears to be active, while parcel 115-080-04 (Peters) appears undeveloped. An unpaved road traverses through the northern and

southeastern Louie parcels, 126-150-23 and 126-020-03. Residential development is present on the two adjacent parcels between the Mikalaco and Norris parcels. Green Springs Drive and residential development are present to the west.

The **1998** and **2005** aerial photographs show the subject property to be similar to what was observed during the site visit. A structure is present on parcel 115-080-04 (Peters).

### 5.3.2 Review of Historical and Current USGS Topographic Maps

A topographic map (topo) is a color coded line-and-symbol representation of natural and selected artificial features plotted to a scale. Topographic maps show the shape, elevation, and development of the terrain in precise detail by using contour lines and color coded symbols. The EDR Historical Topographic Map Report provided maps dated 1893 to 1973. Interpretations were made in an effort to evaluate former uses of the subject property and adjacent areas, and determine if any significant topographic or cultural changes have occurred. A summary of the topographic maps review is provided below. A copy of the EDR - Historical Topographic Map Report is provided in Appendix B.

The **1893** Sacramento 30-minute quadrangle map shows the subject property and surrounding property to be undeveloped. Green Valley Road, Green Spring Creek, and New York Creek are identified in the vicinity of the subject property.

The **1944** Folsom 15-minute quadrangle map shows the majority of the subject property and surrounding property to be undeveloped. An unpaved road is identified entering the Louie parcel 126-150-23, at the northern-most portion of the subject property. A single structure is identified to the east of the unpaved road, adjacent to Green Spring Creek. Green Valley Road and Green Spring Creek are identified in the vicinity of the subject property.

The **1953** Clarksville 7.5-minute quadrangle map shows the majority of the subject property and surrounding property to be undeveloped. An unpaved road is identified entering the Louie parcel 126-150-23, at the northern-most portion of the subject property and bisecting two reservoirs on the parcel. A single structure is identified to the east of the unpaved road, adjacent to Green Spring Creek. Green Valley Road and Green Spring Creek are identified in the vicinity of the subject property.

The **1973** (revised from 1953) Clarksville 7.5-minute quadrangle map shows the majority of the subject property and surrounding property to be undeveloped. An unpaved road is identified entering the Louie parcel 126-150-23, at the northern-most portion of the subject property and bisecting two reservoirs on the parcel. A single structure is identified to the east of the unpaved road, adjacent to Green Spring Creek. Two additional structures are identified on the subject property, on the 1973 revision to the west of Green Valley Road. High-power transmission line is identified at the southern boundary of Louie parcel 126-020-03. The re-alignment of Green Valley Road to the east and the addition of Green Springs Road and Verde Valley Lane to the west are identified on the 1973 revision.

### 5.3.3 Historical City Directory Abstract Review

EDR provided the EDR-City Directory Abstract for review and a copy is provided in Appendix B. Building directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1976 through 2008. The following table summarizes the EDR-City Directory Abstract.

| YEAR | ADDRESS | USE |
|---|---|---|
| | **SUBJECT PROPERTIES** | |
| 1996, 2008 | 1768 Green Valley Road | Residential |
| 1996 | 1838 Green Valley Road | Residential |
| | **NEARBY PROPERTIES** | |
| 1996, 2008 | 1851 Green Valley Road | Residential |
| 1996, 2008 | 1870 Green Valley Road | Residential |

**5.3.4 Review of EDR Environmental Lien Search Report**

The EDR Environmental Lien Search Report for the subject property was received on 9 March 2011 and is provided in Appendix A. The EDR Environmental Lien Search report includes results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

The report identified that title for El Dorado County APN 115-080-04 is vested in Michael J Peters & Betty L Peters in the deed dated 31 December 2008. No environmental liens or other activity and use limitations were found by EDR.

The report identified that title for El Dorado County APN 126-020-02 is vested in Louie Helm Living Trust in the deed dated 15 November 2003. No environmental liens or other activity and use limitations were found by EDR.

The report identified that title for El Dorado County APNs 126-020-03 and 126-150-23 are vested in Louie Helm Living Trust in the deed dated 15 November 2003. No environmental liens or other activity and use limitations were found by EDR.

The report identified that title for El Dorado County APN 125-150-13 is vested in Macon L Vanderburg & Marian Vanderburg in the deed dated 9 December 1991. No environmental liens or other activity and use limitations were found by EDR.

The report identified that title for El Dorado County APN 125-150-15 is vested in Ronald P Mikulaco in the deed dated 6 January 2006. No environmental liens or other activity and use limitations were found by EDR.

The report identified that title for El Dorado County APN 126-150-21 is vested in The Louis SW & Joyce E Sherman Revocable Trust in the deed dated 3 May 1995. No environmental liens or other activity and use limitations were found by EDR.

**6.0 SITE RECONNAISSANCE**

A reconnaissance of the subject property and a windshield survey of the surrounding area were conducted by Youngdahl Consulting Group, Inc. on 9 February 2011. Views of the subject property at the time of the reconnaissance visit are presented as Figures 3 through 14. The property consists of residential property (Mikulaco and Vanderburg), undeveloped residential property (Norris), commercial/agricultural/landfill property (Peters), and property used for various uses (agriculture, residential, cattle grazing, horse boarding, and open space) (Louie).

There is a duplex on the Mikulaco parcel 126-150-15 where Mr. Mikulaco lives and stores his household items and extra vehicles (Photo 1). South of the Mikulaco parcel are two residential parcels that are not included in the project. South of these two parcels is the Norris parcel 126-150-21. The Norris parcel was observed to be a vacant lot (Photo 2) with an electrical pole

onsite. The Peters parcel 115-080-04 is south of the Norris parcel. The Peters parcel includes strawberry fields on the northern portion (Photo 3) and landscaping equipment and storage sheds on the southern portion (Photo 4). Paint cans, gas containers, and other containers were observed on the southern portion of the Peters parcel (Photo 5). An aboveground diesel fuel storage tank (AST) was present on the Peters parcel (Photo 6). Soil and rock piles were also noted on the southern and western slopes of the Peters parcel (Photo 7). The northern and western portions of the Vanderburg parcel 126-150-13 include the residence's mailbox and driveway and undeveloped areas (Photo 8).

The Louie property includes three parcels 126-150-23, 126-020-02, and 126-020-03. Strawberry fields are located in the northernmost portion of parcel 126-150-23 (Photo 9). Two fuel storage tanks, reportedly used as water irrigation tanks for the strawberry field, were observed on surface soil in the northernmost portion of parcel 126-150-23 (Photo 10). A shed with chemicals and fertilizers for the strawberry field was observed in the central portion of parcel 126-150-23 (Photo 11). A landscaping storage yard was also noted in the central portion of parcel 126-150-23 (Photo 12). The historic Dixon Ranch residence and animal sheds (Photo 13) and barn with stored materials (batteries, vehicles, lawnmower, etc.) (Photo 14) are located in the central portion of parcel 126-150-23. East of the historic Dixon Ranch area are two ponds and Green Springs Creek (Photo 15). The southern portion of this parcel is grazing land (Photo 16).

An overhead power line and tower are located at the southern boundary of parcel 126-020-03 (Photo 17). Parcel 126-020-03 is grazing land (Photo 18). A cattle corral is located at the boundary between parcel 126-020-03 and parcel 126-020-02 (Photo 19). Cattle were observed grazing on parcel 126-020-02 (Photo 20). All of parcel 126-020-02 was observed to be cattle grazing land (Photo 21). A rock wall was observed on parcel 126-020-02 (Photo 22). Bisecting parcels 126-020-02 and 126-020-03 is the contemporary Dixon family residential property (Photo 23).

Adjacent to the west is a residential subdivision (Photo 24). Adjacent property to the east includes Green Valley Road and rural residential property. Adjacent property includes rural residential property.

## 7.0 FINDINGS AND CONCLUSIONS

Based on our study the subject is currently mixed use: rural residential, grazing land, and agricultural (strawberry fields). The property is assigned El Dorado County Assessor's Parcel Numbers (APNs): 126-150-13 (Vanderburg), 126-150-15 (Mikulaco), 126-150-23 (Louie), 126-020-02 (Louie), 126-020-03 (Louie), 126-150-21 (Norris), and 115-080-04 (Peters).

- Parcel 126-150-13 (Vanderburg) is undeveloped land historically used for horse grazing.
- Parcel 126-150-15 (Mikulaco) is currently rural residential property historically used as grazing land.
- Parcel 126-150-23 (Louie) is currently includes the historic Dixon Ranch, grazing land, strawberry fields, and two old fuel tanks stored on the soil surface west of the strawberry field. The contents of the two fuel tanks are unknown. According to the County of El Dorado Agricultural Commissioner, strawberry fields do not use "legacy" chemicals that persist over time in the soil.
- Parcels 126-020-02 (Louie) and 126-020-03 (Louie) are used for cattle grazing.
- Parcel 126-150-21 (Norris) is undeveloped land with a water well.
- Parcel 115-080-04 (Peters) is an agricultural dump site with clean fill from swimming pool excavations deposited onsite to depths of 30-40 feet. Mr. Peters was issued a

permit violation for receiving pools spoils after the permit had expired. The 500-gallon aboveground fuel tank has been empty for six years and has only been filled twice, once with gasoline and once with diesel. Mr. Peters stated that the tank has never leaked and no fuel spills have occurred at the tank's location. The northern half is used for strawberry fields. According to the County of El Dorado Agricultural Commissioner, strawberry fields do not use "legacy" chemicals that persist over time in the soil. The central portion is used by the current tenant, Erik Landscaping of Cameron Park, for storage and staging.

### 7.1 Data Gaps

It is the opinion of the Youngdahl Consulting Group Inc.'s environmental professional that no data gaps were identified during completion of this Phase I ESA.

## 8.0 OPINION

Youngdahl Consulting Group, Inc. has performed a Phase I Environmental Site Assessment in general conformance with ASTM Practice E 1527-05. Any exceptions to, or deletions from, this practice are described in Section 1.4 of this report. It is the opinion of the Youngdahl Consulting Group Inc.'s environmental professional that no identified recognized environmental conditions were identified during this review of the subject property. The rationale used for this opinion is the observations made during the site visit, the review of aerial photographs, and interviews with knowledgeable persons. No additional investigation is recommended for the subject property.

There is a potential for lead from lead paint and/or asbestos containing building materials to be present in the older structures on site. If residential development is planned, screening for these contaminants may be required by the local enforcement agency (LEA).

## 9.0 SELECTED REFERENCES

1. Churchill, Ronald, Geologic Controls on the Distribution of Radon in California for the Department of Health Services, 25 January 1991, revised December 2003.

2. Loyd, R.C., (1984): "Mineral Land Classification of the Folsom 15-Minute Quadrangle, Sacramento, El Dorado, Placer, and Amador Counties, California", California Department of Conservation, Division of Mines and Geology, Open-File Report 84-50.

3. U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of El Dorado Area, California, 1974.

4. U.S. Geological Survey Topographic Map – Clarksville, California Topographic Quadrangle, 7.5 minute series, 1953 (photorevised 1980).

## 10.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

**David C. Sederquist, C.E.G., C. HG.**
Registered Geologist - California No. 4715
Certified Engineering Geologist, California No. 2133
Certified Hydrogeologist, California No. 619
Bachelor of Arts in Geology, California State University, Sacramento, 1980

Mr. Sederquist has performed Phase I and Phase II Environmental Site Assessments for commercial, residential, public utility and school projects since 1990. He has assessed, monitored, and closed soil and groundwater contamination sites. He is experienced in working closely with both regulatory officials and property owners/purchasers.

**Laurie B. Israel, R.E.A.**
Registered Environmental Assessor - California No. 05557
Bachelor of Science in Environmental Policy Analysis and Planning, UC - Davis, 1988

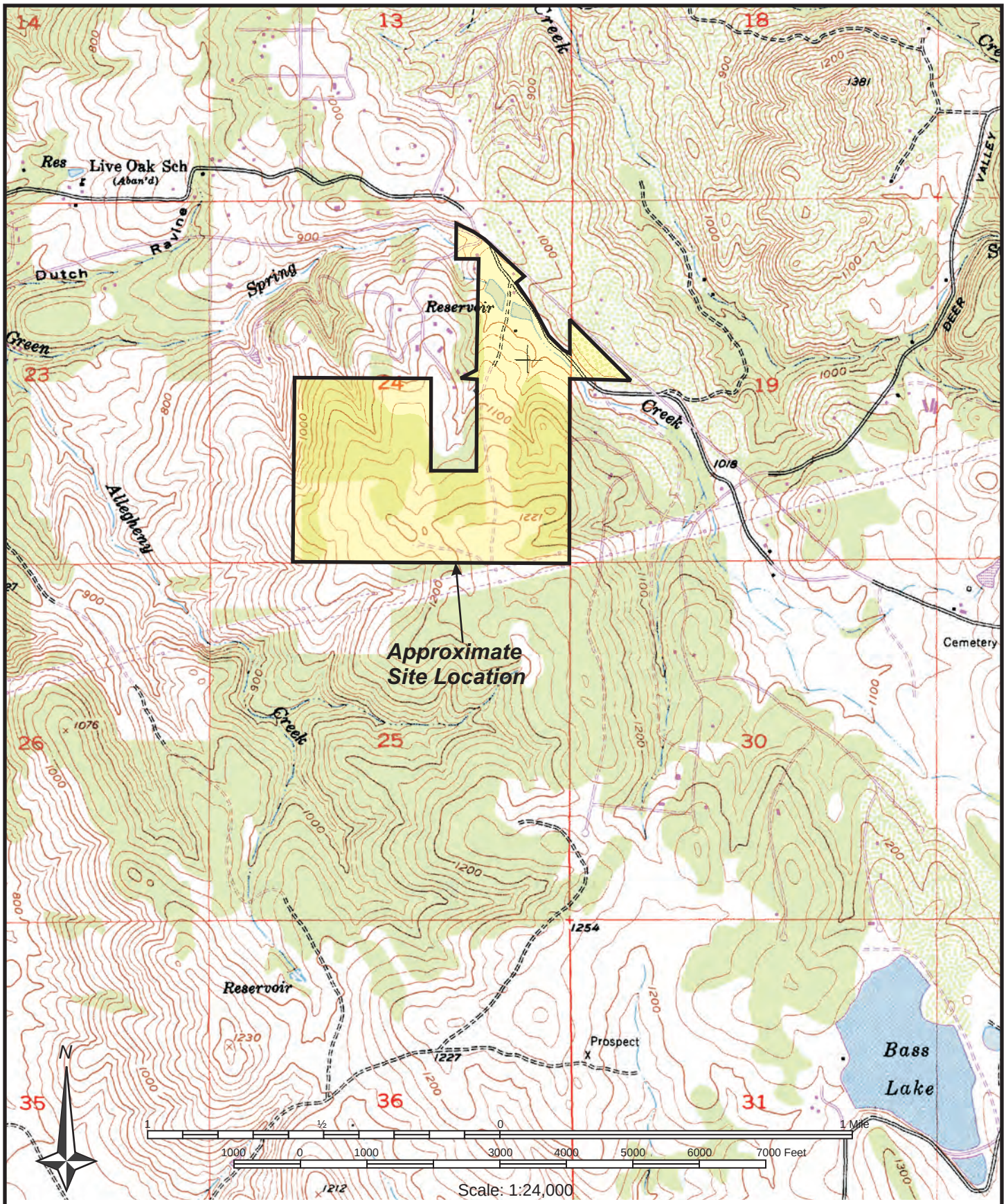
Ms. Israel has worked in the environmental field since 1988. She has been involved in all aspects of Phase I Environmental Site Assessments. Ms. Israel became a Registered Environmental Assessor with the State of California in 1994. Ms. Israel has also performed limited Phase II investigations**.**

# TABLES

**TABLE 1: SUMMARY OF AERIAL PHOTOGRAPHS REVIEWED**
**DIXON RANCH**
**GREEN VALLEY ROAD**
**EL DORADO HILLS, CALIFORNIA 95762**
**Project No. E11047.001**

| AERIAL PHOTOGRAPHS | | | | |
|---|---|---|---|---|
| **Date** | **Provided By** | **Scale (±)** | **Type** | **Source** |
| 1937 | YCG | 1" = 1667' | B&W | National Aerial Resources |
| 1952 | YCG | 1" = 2000' | B&W | National Aerial Resources |
| 1953 | EDR | 1" = 666' | B&W | Pacific Air |
| 1961 | EDR | 1" = 666' | B&W | Cartwright |
| 1973 | EDR | 1" = 666' | B&W | NASA |
| 1984 | EDR | 1" = 690' | B&W | USGS |
| 1993 | EDR | 1" = 666' | B&W | USGS |
| 1998 | EDR | 1" = 666' | B&W | USGS |
| 2005 | EDR | 1" = 604' | Color | EDR |

# FIGURES




**BASE MAP REFERENCE:** *U.S.G.S. 7.5 Minute Topographic Series, Clarksville Quadrangle, Dated 1953 (Revised 1980)*

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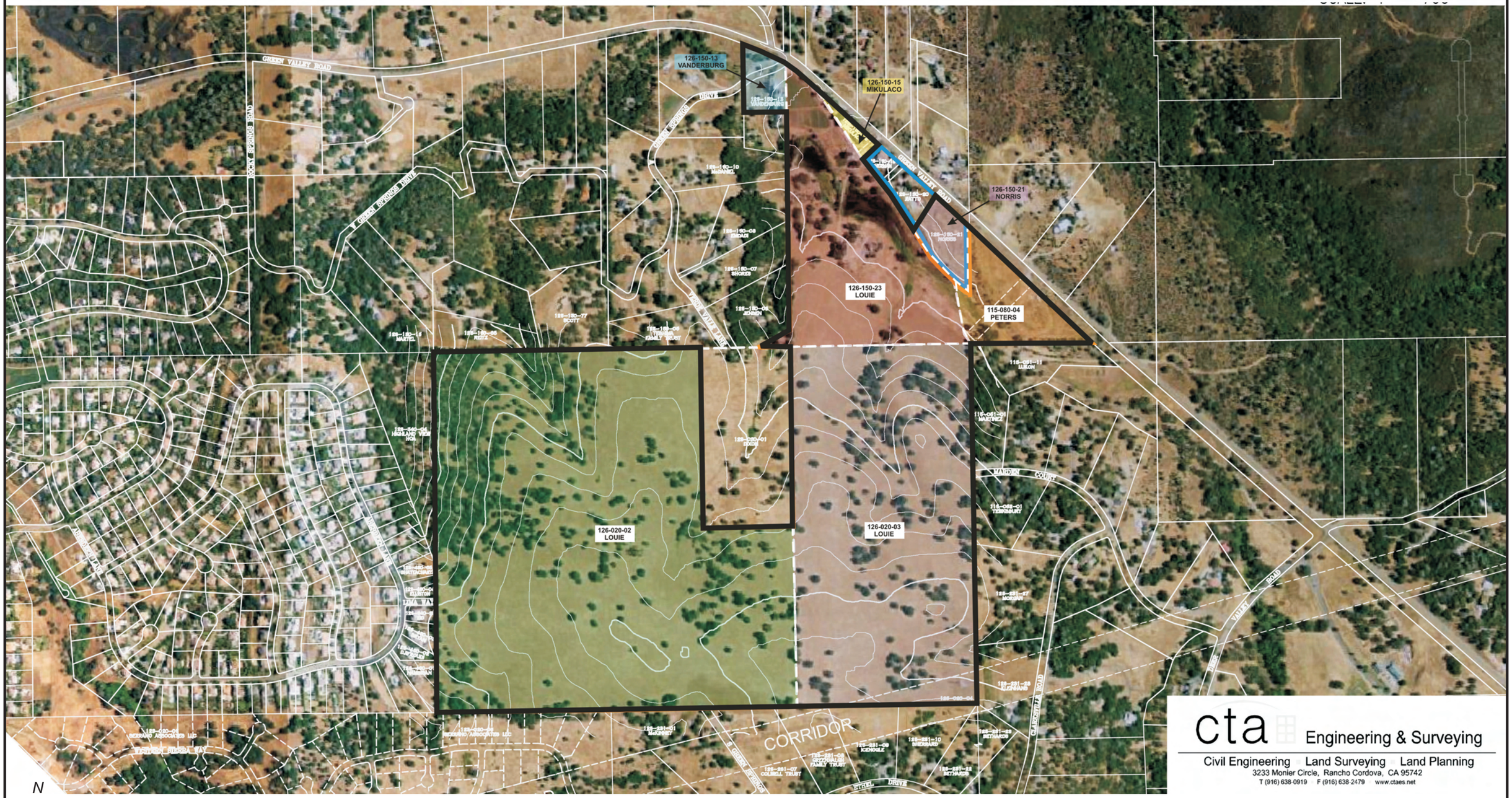
Project No.: E11047.001

April 2011

# VICINITY MAP

**Dixon Ranch - Phase I ESA**
El Dorado Hills, California

**FIGURE 1**




cta Engineering & Surveying

Civil Engineering Land Surveying Land Planning

3233 Monier Circle, Rancho Cordova, CA 95742

T (916) 638-0919 F (916) 638-2479 www.ctaes.net

**BASE MAP REFERENCE:** *Dixon Ranch Project Study Area Exhibit, CTA Engineering & Surveying, January 2010*

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Project No.: E11047.001

April 2011

# SITE PLAN

**Dixon Ranch - Phase I ESA**

El Dorado Hills, California

FIGURE 2





**Photo 1:** Duplex on Mikulaco parcel, APN 126-150-15.



**Photo 2:** Vacant lot comprising the Norris parcel, APN 126-150-21.

| | | | |
|---|---|---|---|
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**Photo 3:** Strawberries field on the northern portion of the Peters parcel, APN 115-080-04.



**Photo 4:** Landscaping equipment and storage sheds on the Peters parcel, APN 115-080-04.

| | | | |
|---|---|---|---|
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**Photo 5:** Paint cans, gas containers, and other containers stored on the Peters parcel, APN 115-080-04.



**Photo 6:** Aboveground diesel fuel storage tank (AST), reportedly empty, on the Peters parcel, APN 115-080-04.



**Photo 7:** Soil and rock piles on the Peters parcel, APN 115-080-04.



**Photo 8:** View of the northern and western portions of the Vanderburg parcel, APN 126-150-13.

| | | | |
|---|---|---|---|
| YOUNGDAHL CONSULTING GROUP, INC.<br>GEOTECHNICAL ▪ ENVIRONMENTAL ▪ MATERIALS TESTING | Project No.:<br>E11047.001<br>**April 2011** | **SITE PHOTOGRAPHS**<br>**Dixon Ranch - Phase I ESA**<br>El Dorado Hills, California | **FIGURE**<br>**6** |



**Photo 9:** Strawberry field in the northernmost portion of the Louie parcel, APN 126-150-23.



**Photo 10:** Former fuel storage tanks reportedly used as water irrigation tanks for the strawberry field in the northernmost portion of the Louie parcel, APN 126-150-23.

| | | | |
|---|---|---|---|
| YOUNGDAHL CONSULTING GROUP, INC.<br>GEOTECHNICAL ▪ ENVIRONMENTAL ▪ MATERIALS TESTING | Project No.:<br>E11047.001<br>**April 2011** | **SITE PHOTOGRAPHS**<br>**Dixon Ranch - Phase I ESA**<br>El Dorado Hills, California | **FIGURE**<br>**7** |



**Photo 11:** Shed with chemicals, fertilizers for the strawberry field in the central portion of the Louie parcel, APN 126-150-23.



**Photo 12:** Landscaping storage yard in the central portion of the Louie parcel, APN 126-150-23.





**Photo 13:** Historic Dixon Ranch residence and animal sheds in the central portion of the Louie parcel, APN 126-150-23.






**Photo 14:** Historic Dixon Ranch barn, interior view (batteries, vehicles, lawnmower, etc), in the central portion of the Louie parcel, APN 126-150-23.

| | | | |
|---|---|---|---|
| YOUNGDAHL CONSULTING GROUP, INC. GEOTECHNICAL ▪ ENVIRONMENTAL ▪ MATERIALS TESTING | Project No.: E11047.001 | **SITE PHOTOGRAPHS** | FIGURE |
| | **April 2011** | **Dixon Ranch - Phase I ESA** El Dorado Hills, California | **9** |





**Photo 15:** Ponds and creek in the central portion of the Louie parcel, APN 126-150-23.



**Photo 16:** Northeast Louie parcel, APN 126-150-23 (view east to south).

| | | | |
|---|---|---|---|
| YOUNGDAHL CONSULTING GROUP, INC.<br>GEOTECHNICAL ▪ ENVIRONMENTAL ▪ MATERIALS TESTING | Project No.:<br>E11047.001<br>**April 2011** | **SITE PHOTOGRAPHS**<br>**Dixon Ranch - Phase I ESA**<br>El Dorado Hills, California | **FIGURE**<br>**10** |



**Photo 17:** Overhead power line and tower at the southern boundary of the Louie parcel APN 126-020-03.



**Photo 18:** Southeast Louie parcel, APN 126-020-03 (view north to east).



**Photo 19:** Cattle corral at the boundary btw the southeast Louie parcel, APN 126-020-03, and southwest Louie parcel, APN 126-020-02.



**Photo 20:** Cattle observed grazing the southwest Louie parcel, APN 126-020-02, (view west, Folsom Lake in background).

| | | | |
|---|---|---|---|
| YOUNGDAHL CONSULTING GROUP, INC.<br>GEOTECHNICAL ▪ ENVIRONMENTAL ▪ MATERIALS TESTING | Project No.: E11047.001<br>**April 2011** | **SITE PHOTOGRAPHS**<br>**Dixon Ranch - Phase I ESA**<br>El Dorado Hills, California | **FIGURE**<br>**12** |



**Photo 21:** Grazing land in the southwest Louie parcel, APN 126-020-02. View to east, southeast



**Photo 22:** Rockwall in the southwest Louie parcel, APN 126-020-02. View to the west.

| | | | |
|---|---|---|---|
| YOUNGDAHL CONSULTING GROUP, INC. GEOTECHNICAL ▪ ENVIRONMENTAL ▪ MATERIALS TESTING | Project No.: E11047.001<br>April 2011 | **SITE PHOTOGRAPHS**<br>**Dixon Ranch - Phase I ESA**<br>El Dorado Hills, California | FIGURE<br>13 |



**Photo 23:** Dixon property bisecting the southeast and southwest Louie parcels. View to west.

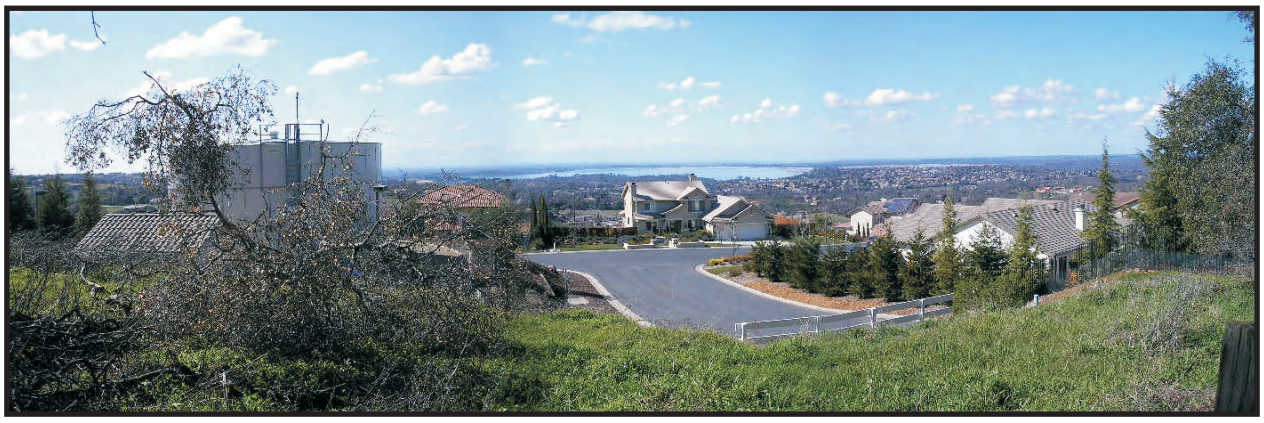

**Photo 24:** Adjacent residential subdivision to the west.

# APPENDICES

**APPENDIX A**

Phase I ESA Questionnaires
Telephone Conversation Records
EDR Environmental Lien Search Report

# TELEPHONE CONVERSATION RECORD

NAME OF CONTACT _____ DATE 3/21/11 TIME 10:20

COMPANY NAME: EDC Ag. Commissioner

TELEPHONE NO: 530 621-5520 FAX NO. _____

MAILING ADDRESS _____

PROJECT NAME AND NUMBER E11047.001

NOTES Strawberry Fields (GV Road)

Peters - 115-080-04

Louie - 126-150-23

(CUPA) → Leigh Ann →
EDC

Dept. of Ag - ~~State~~ of CA; fee; 1 week
Public Records Request → APN
→ 3 yrs - 4 yrs
→ no legacy; round up
→ 3 yrs no pesticides; to be organic

Recorded by Laurie Israel

## Phase I Environmental Site Assessment

**Site Name:** Vanderburg APN 126-150-13 (northern portion only)
**Location:** 1768 Green Valley Road, El Dorado County, California

The ASTM Standards require that you, or your representative who is knowledgeable regarding the use and condition of the property, answer the questions found on the following site assessment questionnaire.

Please answer these questions in good faith and to the extent of your actual knowledge. Circle the appropriate answer. For yes answers please provide additional explanation. We would appreciate it if you would FAX the completed questionnaire to Laurie Israel as soon as possible. (Youngdahl Consulting Group, Inc. FAX: 916-933-6482 or Email to laurie5565@yahoo.com)

| | | | | |
|---|---|---|---|---|
| 1. | Currently is, or in the past has, the *property* or any *adjoining* property been used for an industrial use? | Yes | (No) | Unknown |
| 2. | Currently is, or in the past has, the *property* or any *adjoining* property been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility? | Yes | (No) | Unknown |
| 3. | Are there currently, or have there been previously, any damaged or discarded automotive or industrial batteries, or pesticides, paints, or other chemicals in individual containers of greater than 5 gal (19 L) in volume or 50 gal (208 L) in the aggregate, stored on or used at the *property*? | Yes | (No) | Unknown |
| 4. | Are there currently, or have there been previously, any industrial *drums* (typically 55 gal (208 L)) or sacks of chemicals located on the property? | Yes | (No) | Unknown |
| 5. | Has *fill dirt* been brought on to the property that originated from a contaminated site or that is of an unknown origin? | Yes | (No) | Unknown |
| 6. | Are there currently, or have there been previously, any *pits, ponds, or lagoons* located on the *property* in connection with waste treatment or waste disposal? | Yes | (No) | Unknown |



Mar 23 11 12:30p LEE VANDERBURG 9169331724 p.1

| | | | | |
|---|---|---|---|---|
| 7. | Is there currently, or has there been previously, any stained soil on the *property*? | Yes | (No) | Unknown |
| 8. | Are there currently, or have there been previously, any registered or unregistered storage tanks (above or underground) located on the *property*? ON YOUR PROPERTY OLD GAS TANKS I HAVE CALLED TH COUNTY ABOUT DEFI | (Yes) | ~~No~~ | Unknown |
| 9. | Are there currently, or have there been previously, any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the *property*? | Yes | (No) | Unknown |
| 10. | Are there currently, or have there been previously, any flooring, drains, or walls located within the facility that are stained by substances other than water or are emitting unusual odors? | Yes | (No) | Unknown |
| 11. | If the *property* is served by a private well or non-public water system, have contaminants been identified in the well or system that exceed guidelines applicable to the water system or has the well been designated as contaminated by any government environmental/health agency? | Yes | (No) | Unknown |
| 12. | Are you aware of any floor drains or sumps on the property? | Yes | (No) | Unknown |
| 13. | Have any *hazardous substances* or *petroleum products*, unidentified waste materials, tires, automotive or industrial batteries or any other waste materials been dumped above grade, buried and/or burned on the *property*? | Yes | (No) | Unknown |
| 14. | Are there any transformers, capacitors, or hydraulic equipment on the property which may contain PCBs? | Yes | (No) | Unknown |
| 15. | Do you have any knowledge of *environmental liens* with respect to the *property*? | Yes | (No) | Unknown |

| | | | | |
|---|---|---|---|---|
| 16. | Have you been informed of the past or current existence of environmental violations with respect to the *property*? | Yes | (No) | Unknown |
| 17. | Do you have any knowledge of any *environmental site assessments* of the *property*? | Yes | (No) | Unknown |
| 18. | Do you know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any *hazardous substance* or *petroleum products* involving the *property*? | Yes | (No) | Unknown |
| 19. | Is the purchase price or appraised value of the property significantly less than comparable properties in the vicinity? | Yes | No | (Unknown) |

To the best of the undersigned knowledge, the above statements and facts are true and correct and to the best of the undersigned's actual knowledge no material facts have been suppressed or misstated.

This questionnaire was completed by:

**NAME (PRINT):** LEE VANDERBURG **(SIGNATURE):** [signature]

**TITLE:** **ADDRESS:** 1768 GREEN VALLEY

**FIRM:** **DATE:** EL DORADO HILLS 95762

**PHONE NUMBER:** 916 933-0214 **FAX NUMBER:**

**RELATIONSHIP TO SITE:** (Owner) ____ **or Owner's Representative** ____



Mar 23 11 12:31p LEE VANDERBURG 9169331724 p.3

## TELEPHONE CONVERSATION RECORD

NAME OF CONTACT Ron Mikulaco DATE 3/1/11 TIME 1:40

COMPANY NAME APN 126-150-15

TELEPHONE NO (916) 715-0070 FAX NO.

MAILING ADDRESS 1838 + 1840 Green Valley Road

PROJECT NAME AND NUMBER E11047.001

NOTES Eldoradoeclipse@yahoo.com

Ron Mikulaco (916) 715-0070 lives onsite, duplex
- strawberry patch, 40 yrs
- septic, onsite, well (?) 1838 & 1840 Green Valley Road

Strawberries → leased
→ organic farming; sun + water
→ one domestic 250' deep
→ Perc test in 2002,
→ 2, 1000-gal septic tanks
→ duplex R5; tenant in other
→ park + use bathrooms ok

Em Q 3/1/11

Recorded by Laurie Israel

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El Dorado Hills, CA 95762

YOUNGDAHL CONSULTING GROUP, INC.
*Building Innovative Solutions*
1234 Glenhaven Court, El Dorado Hills, Ca 95762
5750 Arabian Lane, Loomis, Ca 95650
ph 916.933.0633 fx 916.933.6482
www.youngdahl.net

## Phase I Environmental Site Assessment

**Site Name:** Mikulaco APN 126-150-15
**Location:** 1838 & 1840 Green Valley Road, El Dorado County, California

The ASTM Standards require that you, or your representative who is knowledgeable regarding the use and condition of the property, answer the questions found on the following site assessment questionnaire.

Please answer these questions in good faith and to the extent of your actual knowledge. Circle the appropriate answer. For yes answers please provide additional explanation. We would appreciate it if you would FAX the completed questionnaire to Laurie Israel as soon as possible. (Youngdahl Consulting Group, Inc. FAX: 916-933-6482 or Email to laurie5565@yahoo.com)

| | | | | |
|---|---|---|---|---|
| 1. | Currently is, or in the past has, the *property* or any *adjoining* property been used for an industrial use? | Yes | (No) | Unknown |
| 2. | Currently is, or in the past has, the *property* or any *adjoining* property been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility? | Yes | (No) | Unknown |
| 3. | Are there currently, or have there been previously, any damaged or discarded automotive or industrial batteries, or pesticides, paints, or other chemicals in individual containers of greater than 5 gal (19 L) in volume or 50 gal (208 L) in the aggregate, stored on or used at the *property*? | Yes | (No) | Unknown |
| 4. | Are there currently, or have there been previously, any industrial *drums* (typically 55 gal (208 L)) or sacks of chemicals located on the property? | Yes | (No) | Unknown |
| 5. | Has *fill dirt* been brought on to the property that originated from a contaminated site or that is of an unknown origin? | Yes | (No) | Unknown |
| 6. | Are there currently, or have there been previously, any *pits, ponds, or lagoons* located on the *property* in connection with waste treatment or waste disposal? | Yes | (No) | Unknown |

| | | | | |
|---|---|---|---|---|
| 7. | Is there currently, or has there been previously, any stained soil on the *property*? | Yes | (No) | Unknown |
| 8. | Are there currently, or have there been previously, any registered or unregistered storage tanks (above or underground) located on the *property*? | Yes | (No) | Unknown |
| 9. | Are there currently, or have there been previously, any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the *property*? | Yes | (No) | Unknown |
| 10. | Are there currently, or have there been previously, any flooring, drains, or walls located within the facility that are stained by substances other than water or are emitting unusual odors? | Yes | (No) | Unknown |
| 11. | If the *property* is served by a private well or non-public water system, have contaminants been identified in the well or system that exceed guidelines applicable to the water system or has the well been designated as contaminated by any government environmental/health agency? | Yes | (No) | Unknown |
| 12. | Are you aware of any floor drains or sumps on the property? | Yes | (No) | Unknown |
| 13. | Have any *hazardous substances* or *petroleum products,* unidentified waste materials, tires, automotive or industrial batteries or any other waste materials been dumped above grade, buried and/or burned on the *property*? | Yes | (No) | Unknown |
| 14. | Are there any transformers, capacitors, or hydraulic equipment on the property which may contain PCBs? | Yes | (No) | Unknown |
| 15. | Do you have any knowledge of *environmental liens* with respect to the *property*? | Yes | (No) | Unknown |

| | | | | |
|---|---|---|---|---|
| 16. | Have you been informed of the past or current existence of environmental violations with respect to the *property*? | Yes | (No) | Unknown |
| 17. | Do you have any knowledge of any *environmental site assessments* of the *property*? | Yes | (No) | Unknown |
| 18. | Do you know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any *hazardous substance* or *petroleum products* involving the *property*? | Yes | (No) | Unknown |
| 19. | Is the purchase price or appraised value of the property significantly less than comparable properties in the vicinity? | Yes | (No) | Unknown |

To the best of the undersigned knowledge, the above statements and facts are true and correct and to the best of the undersigned's actual knowledge no material facts have been suppressed or misstated.

This questionnaire was completed by:

| | |
|---|---|
| **NAME (PRINT):** Ron Mikulina | **(SIGNATURE):** |
| **TITLE:** Owner | **ADDRESS:** |
| **FIRM:** | **DATE:** 3/2/2011 |
| **PHONE NUMBER:** 9167150070 | **FAX NUMBER:** |
| **RELATIONSHIP TO SITE: Owner** X | **or Owner's Representative** _____ |

TELEPHONE CONVERSATION RECORD

NAME OF CONTACT Richard Klingensmith DATE 3/1/11 TIME 2:15

COMPANY NAME Louie APN

TELEPHONE NO. (530)417-3240 FAX NO. _____

MAILING ADDRESS _____

PROJECT NAME AND NUMBER E11047.001

NOTES

Richard Klingensmith - onsite trailer; drugs(?) (~~916~~ 530) 417-3240

(has key to gate)

- asked to leave but is still onsite
- → 65-70 yrs old
- well at old Dixon house & ~~septic~~
- dug a pit to install septic, next to trailer
- has an outhouse onsite / port-a-potty
- teaches tennis
- sublet for horses onsite

3/1 - No answer, lmon vm Rich

Recorded by Laurie Israel

## TELEPHONE CONVERSATION RECORD

NAME OF CONTACT Fay Louie DATE _____ TIME _____

COMPANY NAME _____

TELEPHONE NO. _____ FAX NO. _____

MAILING ADDRESS _____

_____

PROJECT NAME AND NUMBER E11047.001

NOTES

Richard & Klingin-Smith caretaker for Louie

Southside of lake (bigger) there is a house

~~one~~ two earthen dams (vacant, old)

Fay Louie, Strawberries, leased grazing, (Trailer 2)

, Bay Area; Trust owner leased to M. Peters

Dixon Family in [ ] rectangle in middle live onsite

3200 Verde Valle Rd

Ms. Kim Dixon

Joyce (mother) + Bill live / Have historical info

Home onsite, Slaughterhouse

Recorded by Laurie Israel

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5750 Arabian Lane, Loomis, Ca 95650
ph 916.933.0633 fx 916.933.6482
www.youngdahl.net

25 YEARS

## Phase I Environmental Site Assessment

**Site Name:** Louie APNs 126-150-23, 126-020-02, & 126-020-03
**Location:** Green Valley Road, El Dorado County, California

The ASTM Standards require that you, or your representative who is knowledgeable regarding the use and condition of the property, answer the questions found on the following site assessment questionnaire.

Please answer these questions in good faith and to the extent of your actual knowledge. Circle the appropriate answer. For yes answers please provide additional explanation. We would appreciate it if you would FAX the completed questionnaire to Laurie Israel as soon as possible. (Youngdahl Consulting Group, Inc. FAX: 916-933-6482 or Email to laurie5565@yahoo.com)

| | | | | |
|---|---|---|---|---|
| 1. | Currently is, or in the past has, the *property* or any *adjoining* property been used for an industrial use? | Yes | (No) | Unknown |
| 2. | Currently is, or in the past has, the *property* or any *adjoining* property been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility? | Yes | No | (Unknown) |
| 3. | Are there currently, or have there been previously, any damaged or discarded automotive or industrial batteries, or pesticides, paints, or other chemicals in individual containers of greater than 5 gal (19 L) in volume or 50 gal (208 L) in the aggregate, stored on or used at the *property*? | Yes | (No) | Unknown |
| 4. | Are there currently, or have there been previously, any industrial *drums* (typically 55 gal (208 L)) or sacks of chemicals located on the property? | Yes | (No) | Unknown |
| 5. | Has *fill dirt* been brought on to the property that originated from a contaminated site or that is of an unknown origin? | Yes | (No) | Unknown |
| 6. | Are there currently, or have there been previously, any *pits, ponds, or lagoons* located on the *property* in connection with waste treatment or waste disposal? | Yes | (No) | Unknown |

| | | | | |
|---|---|---|---|---|
| 7. | Is there currently, or has there been previously, any stained soil on the *property*? | Yes | (No) | Unknown |
| 8. | Are there currently, or have there been previously, any registered or unregistered storage tanks (above or underground) located on the *property*? | (Yes) | No | Unknown |
| 9. | Are there currently, or have there been previously, any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the *property*? | Yes | (No) | Unknown |
| 10. | Are there currently, or have there been previously, any flooring, drains, or walls located within the facility that are stained by substances other than water or are emitting unusual odors? | Yes | (No) | Unknown |
| 11. | If the *property* is served by a private well or non-public water system, have contaminants been identified in the well or system that exceed guidelines applicable to the water system or has the well been designated as contaminated by any government environmental/health agency? | Yes | (No) | Unknown |
| 12. | Are you aware of any floor drains or sumps on the property? | Yes | (No) | Unknown |
| 13. | Have any *hazardous substances* or *petroleum products,* unidentified waste materials, tires, automotive or industrial batteries or any other waste materials been dumped above grade, buried and/or burned on the *property*? | Yes | No | (Unknown) |
| 14. | Are there any transformers, capacitors, or hydraulic equipment on the property which may contain PCBs? | Yes | (No) | Unknown |
| 15. | Do you have any knowledge of *environmental liens* with respect to the *property*? | Yes | (No) | Unknown |

2 TANKS BY STRAWBERRIES

| | | | | |
|---|---|---|---|---|
| 16. | Have you been informed of the past or current existence of environmental violations with respect to the *property*? | Yes | (No) | Unknown |
| 17. | Do you have any knowledge of any *environmental site assessments* of the *property*? | Yes | (No) | Unknown |
| 18. | Do you know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any *hazardous substance* or *petroleum products* involving the *property*? | Yes | (No) | Unknown |
| 19. | Is the purchase price or appraised value of the property significantly less than comparable properties in the vicinity? | Yes | No | (Unknown) |

To the best of the undersigned knowledge, the above statements and facts are true and correct and to the best of the undersigned's actual knowledge no material facts have been suppressed or misstated.

This questionnaire was completed by:

| | |
|---|---|
| **NAME (PRINT):** RICHARD SMITH | **(SIGNATURE):** R.D.S |
| **TITLE:** CARETAKER | **ADDRESS:** 1856 GREEN VALLEY ROAD |
| **FIRM:** | **DATE:** |
| **PHONE NUMBER:** 530 417 3240 | **FAX NUMBER:** |
| **RELATIONSHIP TO SITE: Owner** _____ | **or Owner's Representative** ✓ |

## TELEPHONE CONVERSATION RECORD

NAME OF CONTACT Bill Norris DATE 3/1/11 TIME 2pm

COMPANY NAME APN 126-160-21

TELEPHONE NO. (916) 939-0813 FAX NO. _____

MAILING ADDRESS 363 Kipps Lane
EDH 95762

PROJECT NAME AND NUMBER E11047.001

NOTES

Bill Norris (916) 939-0813 + Phyllis (No address) (Not in proj yet)
(OK to visit)
- graded, no structure
- not that friendly

- 5-6 years
- Well, 20-gal/min,
- Compaction, bldg site for home
- Well was already in when purchased

Recorded by Laurie Israel

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25 YEARS YOUNGDAHL CONSULTING GROUP INC.

## Phase I Environmental Site Assessment

**Site Name:** Norris APN 126-150-21
**Location:** Green Valley Road, El Dorado County, California

The ASTM Standards require that you, or your representative who is knowledgeable regarding the use and condition of the property, answer the questions found on the following site assessment questionnaire.

Please answer these questions in good faith and to the extent of your actual knowledge. Circle the appropriate answer. For yes answers please provide additional explanation. We would appreciate it if you would FAX the completed questionnaire to Laurie Israel as soon as possible. (Youngdahl Consulting Group, Inc. FAX: 916-933-6482 or Email to laurie5565@yahoo.com)

| | | | | |
|---|---|---|---|---|
| 1. | Currently is, or in the past has, the *property* or any *adjoining* property been used for an industrial use? | Yes | (No) | Unknown |
| 2. | Currently is, or in the past has, the *property* or any *adjoining* property been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility? | Yes | (No) | Unknown |
| 3. | Are there currently, or have there been previously, any damaged or discarded automotive or industrial batteries, or pesticides, paints, or other chemicals in individual containers of greater than 5 gal (19 L) in volume or 50 gal (208 L) in the aggregate, stored on or used at the *property*? | Yes | (No) | Unknown |
| 4. | Are there currently, or have there been previously, any industrial *drums* (typically 55 gal (208 L)) or sacks of chemicals located on the property? | Yes | (No) | Unknown |
| 5. | Has *fill dirt* been brought on to the property that originated from a contaminated site or that is of an unknown origin? | Yes | (No) | Unknown |
| 6. | Are there currently, or have there been previously, any *pits, ponds, or lagoons* located on the *property* in connection with waste treatment or waste disposal? | Yes | (No) | Unknown |

| | | | | |
|---|---|---|---|---|
| 7. | Is there currently, or has there been previously, any stained soil on the *property*? | Yes | No | Unknown |
| 8. | Are there currently, or have there been previously, any registered or unregistered storage tanks (above or underground) located on the *property*? | Yes | No | Unknown |
| 9. | Are there currently, or have there been previously, any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the *property*? | Yes | No | Unknown |
| 10. | Are there currently, or have there been previously, any flooring, drains, or walls located within the facility that are stained by substances other than water or are emitting unusual odors? | Yes | No | Unknown |
| 11. | If the *property* is served by a private well or non-public water system, have contaminants been identified in the well or system that exceed guidelines applicable to the water system or has the well been designated as contaminated by any government environmental/health agency? | Yes | No | Unknown |
| 12. | Are you aware of any floor drains or sumps on the property? | Yes | No | Unknown |
| 13. | Have any *hazardous substances* or *petroleum products,* unidentified waste materials, tires, automotive or industrial batteries or any other waste materials been dumped above grade, buried and/or burned on the *property*? | Yes | No | Unknown |
| 14. | Are there any transformers, capacitors, or hydraulic equipment on the property which may contain PCBs? | Yes | No | Unknown |
| 15. | Do you have any knowledge of *environmental liens* with respect to the *property*? | Yes | No | Unknown |

| | | | | |
|---|---|---|---|---|
| 16. | Have you been informed of the past or current existence of environmental violations with respect to the *property*? | Yes | No | Unknown |
| 17. | Do you have any knowledge of any *environmental site assessments* of the *property*? | Yes | No | Unknown |
| 18. | Do you know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any *hazardous substance* or *petroleum products* involving the *property*? | Yes | No | Unknown |
| 19. | Is the purchase price or appraised value of the property significantly less than comparable properties in the vicinity? | Yes | No | Unknown |

To the best of the undersigned knowledge, the above statements and facts are true and correct and to the best of the undersigned's actual knowledge no material facts have been suppressed or misstated.

This questionnaire was completed by: William J Norris

**NAME (PRINT):** William J Norris **(SIGNATURE):** William J Norris

**TITLE:** OWNER **ADDRESS:** 363 Keyes Ln.

**FIRM:** **DATE:** Mar. 4 – 11 GDH

**PHONE NUMBER:** **FAX NUMBER:**

**RELATIONSHIP TO SITE: Owner** _____ **or Owner's Representative** _____

# TELEPHONE CONVERSATION RECORD

NAME OF CONTACT Mike Peters DATE 3/31 TIME _____

COMPANY NAME APN 115-080-04

TELEPHONE NO. (772) 237-2999 FAX NO. Em/ iamsassy@aol.com

MAILING ADDRESS Florida #)

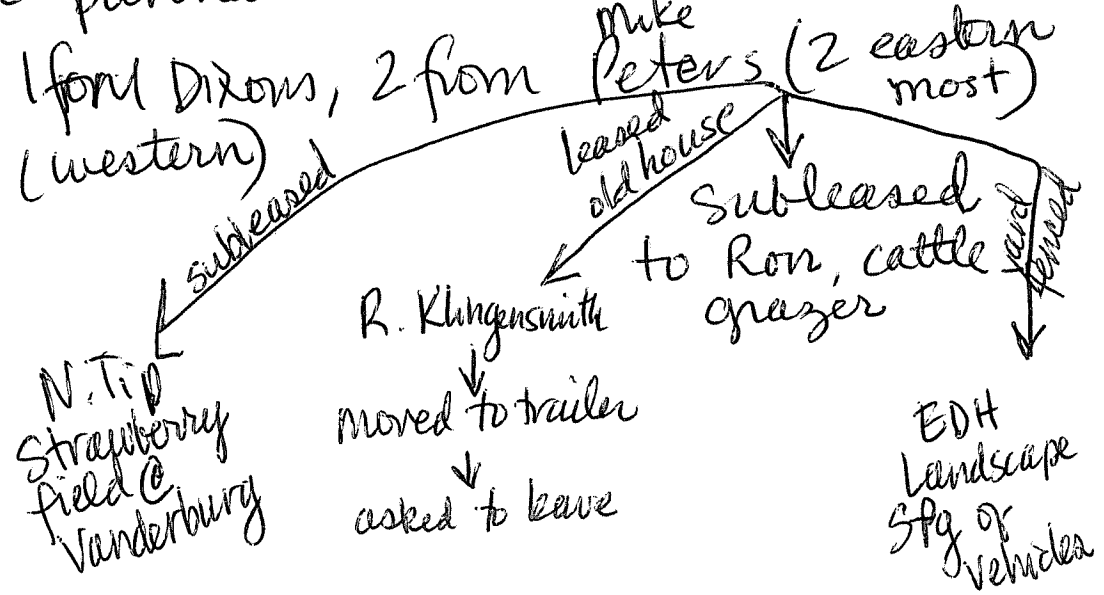
PROJECT NAME AND NUMBER E11047.001

NOTES

Mike Peters (772) 237-2999 (Florida)
Em iamsassymb@aol.com
Storage unit, AST, well
Leasing to landscaper for mat'ls stg
Subleasing to strawberry grower

→ End dumps on Peters triangle parcel from ??

Fay Louie purchased in ~ 2003 all 3 parcels, 1 from Dixons, 2 from Mike Peters (2 easterly most)



TELEPHONE CONVERSATION RECORD

NAME OF CONTACT Mike Peters DATE 3/31/11 TIME 11:00

COMPANY NAME

TELEPHONE NO. 772-237-2999 FAX NO.

MAILING ADDRESS

PROJECT NAME AND NUMBER E11047.0001

NOTES Purchased property 15 years ago

→ when purchased 15yrs ago, 30-40'ft covered NOA w/ pool spoils
4yrs ago; ag permit for pool spoils w/ rocks, ag dumpsite
- 3 months, pool spoils dumped after permit expired
- County ED. Notice to , Lien on 10acres
- Reduced sale $ 50K
- County wanted compaction tests

Mr. Peter - Fuel tank owned by him, spill system
Tenant: is cat litter, only filled 1-2x
500 gal gasoline 1x
& diesel 1x
- tank empty for 6 years
- no spills

Erik Landscaping in Cameron Park - tenant
Sold land to Fay Louie -

Recorded by Laurie Israel

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ph 916.933.0633 fx 916.933.6482
www.youngdahl.net

## Phase I Environmental Site Assessment

**Site Name:** Peters APN 115-080-04
**Location:** Green Valley Road, El Dorado County, California

The ASTM Standards require that you, or your representative who is knowledgeable regarding the use and condition of the property, answer the questions found on the following site assessment questionnaire.

Please answer these questions in good faith and to the extent of your actual knowledge. Circle the appropriate answer. For yes answers please provide additional explanation. We would appreciate it if you would FAX the completed questionnaire to Laurie Israel as soon as possible. (Youngdahl Consulting Group, Inc. FAX: 916-933-6482 or Email to laurie5565@yahoo.com)

| | | | | |
|---|---|---|---|---|
| 1. | Currently is, or in the past has, the *property* or any *adjoining* property been used for an industrial use? | Yes | (No) | Unknown |
| 2. | Currently is, or in the past has, the *property* or any *adjoining* property been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility? | Yes | (No) | Unknown |
| 3. | Are there currently, or have there been previously, any damaged or discarded automotive or industrial batteries, or pesticides, paints, or other chemicals in individual containers of greater than 5 gal (19 L) in volume or 50 gal (208 L) in the aggregate, stored on or used at the *property*? | Yes | (No) | Unknown |
| 4. | Are there currently, or have there been previously, any industrial *drums* (typically 55 gal (208 L)) or sacks of chemicals located on the property? | Yes | (No) | Unknown |
| 5. | Has *fill dirt* been brought on to the property that originated from a contaminated site or that is of an unknown origin? | Yes | No | (Unknown) |
| 6. | Are there currently, or have there been previously, any *pits, ponds, or lagoons* located on the *property* in connection with waste treatment or waste disposal? | Yes | (No) | Unknown |

| | | | | |
|---|---|---|---|---|
| 7. | Is there currently, or has there been previously, any stained soil on the *property*? | Yes | (No) | Unknown |
| 8. | Are there currently, or have there been previously, any registered or unregistered storage tanks (above or underground) located on the *property*? | Yes | (No) | Unknown |
| 9. | Are there currently, or have there been previously, any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the *property*? | Yes | (No) | Unknown |
| 10. | Are there currently, or have there been previously, any flooring, drains, or walls located within the facility that are stained by substances other than water or are emitting unusual odors? | Yes | (No) | Unknown |
| 11. | If the *property* is served by a private well or non-public water system, have contaminants been identified in the well or system that exceed guidelines applicable to the water system or has the well been designated as contaminated by any government environmental/health agency? | Yes | (No) | Unknown |
| 12. | Are you aware of any floor drains or sumps on the property? | Yes | (No) | Unknown |
| 13. | Have any *hazardous substances* or *petroleum products,* unidentified waste materials, tires, automotive or industrial batteries or any other waste materials been dumped above grade, buried and/or burned on the *property*? | Yes | (No) | Unknown |
| 14. | Are there any transformers, capacitors, or hydraulic equipment on the property which may contain PCBs? | Yes | (No) | Unknown |
| 15. | Do you have any knowledge of *environmental liens* with respect to the *property*? | Yes | (No) | Unknown |

| | | | | |
|---|---|---|---|---|
| 16. | Have you been informed of the past or current existence of environmental violations with respect to the *property*? | (Yes) | No | Unknown |
| 17. | Do you have any knowledge of any *environmental site assessments* of the *property*? | Yes | (No) | Unknown |
| 18. | Do you know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any *hazardous substance* or *petroleum products* involving the *property*? | Yes | (No) | Unknown |
| 19. | Is the purchase price or appraised value of the property significantly less than comparable properties in the vicinity? | Yes | (No) | Unknown |

To the best of the undersigned knowledge, the above statements and facts are true and correct and to the best of the undersigned's actual knowledge no material facts have been suppressed or misstated.

This questionnaire was completed by:

| | |
|---|---|
| **NAME (PRINT):** Michael J. Peters | **(SIGNATURE):** Michael J. Peters |
| **TITLE:** Owner/with Wife | **ADDRESS:** 3956 SW Hamlin ST. |
| **FIRM:** Self | **DATE:** 3-20-11 |
| **PHONE NUMBER:** 777-737-1999 | **FAX NUMBER:** Same. |
| **RELATIONSHIP TO SITE: Owner** _____ | **or Owner's Representative** _____ |

# TELEPHONE CONVERSATION RECORD

NAME OF CONTACT _____ DATE 3/21/11 TIME 10:20

COMPANY NAME: EDC Ag. Commissioner

TELEPHONE NO: 530 621-5520 FAX NO. _____

MAILING ADDRESS _____

PROJECT NAME AND NUMBER E11047.001

NOTES Strawberry Fields (GV Road)

Peters - 115-080-04

Louie - 126-150-23

(CUPA) → Leigh Ann →
EDC

Dept. of Ag - ~~State~~ of CA; fee; 1 week
Public Records Request → APN
→ 3 yrs - 4 yrs
→ no legacy; round up
→ 3 yrs no pesticides; to be organic

Recorded by Laurie Israel

**Dixon Ranch**
Green Valley Road
El Dorado Hills, CA 95762

Inquiry Number: 3002996.7
March 09, 2011

# The EDR Environmental LienSearch™ Report

Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

# The EDR Environmental LienSearch™ Report

The EDR Environmental LienSearch Report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied address information to:

- search for parcel information and/or legal description;
- search for ownership information;
- research official land title documents recorded at jurisdictional agencies such as recorders' offices, registries of deeds, county clerks' offices, etc.;
- access a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument(s) (title, parties involved, and description); and
- provide a copy of the deed or cite documents reviewed.

***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.

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# The EDR Environmental LienSearch™ Report

## TARGET PROPERTY INFORMATION

### ADDRESS

Green Valley Road
Dixon Ranch
El Dorado Hills, CA 95762

### RESEARCH SOURCE

**Source 1:**

El Dorado county recorder
El Dorado, CA

### PROPERTY INFORMATION

**Deed 1:**

| | |
|---|---|
| Type of Deed: | Deed |
| Title is vested in: | Michael J Peters & Betty L Peters |
| Title received from: | Placer Foreclosure Inc |
| Deed Dated | 12/31/2008 |
| Deed Recorded: | 7/20/2009 |
| Book: | NA |
| Page: | na |
| Volume: | na |
| Instrument: | na |
| Docket: | NA |
| Land Record Comments: | see exhibit |
| Miscellaneous Comments: | 115-080-04 |
| **Legal Description:** | see exhibit |
| **Legal Current Owner:** | Michael J Peters & Betty L Peters |
| **Property Identifiers:** | 115-080-04 |
| **Comments:** | see exhibit |

**Deed 2:**

| | |
|---|---|
| Type of Deed: | Deed |
| Title is vested in: | Louie Helm living trust |
| Title received from: | Jenny louie Helm |
| Deed Dated | 11/15/2003 |
| Deed Recorded: | 1/7/2004 |
| Book: | NA |
| Page: | na |
| Volume: | na |
| Instrument: | na |
| Docket: | NA |

| | |
|---|---|
| Land Record Comments: | see exhibit |
| Miscellaneous Comments: | 126-020-02<br>old APN 067-051-09 |
| **Legal Description:** | see exhibit |
| **Legal Current Owner:** | Louie Helm living Trust |
| **Property Identifiers:** | 126-020-02 |
| **Comments:** | see exhibit |

**Deed 3:**

| | |
|---|---|
| Type of Deed: | Deed |
| Title is vested in: | Louie Helm living trust |
| Title received from: | Jenny Louie Helm |
| Deed Dated | 11/15/2003 |
| Deed Recorded: | 1/7/2004 |
| Book: | NA |
| Page: | na |
| Volume: | na |
| Instrument: | na |
| Docket: | NA |
| Land Record Comments: | see exhibit |
| Miscellaneous Comments: | 126-020-03, 126-150-23<br>old apn- 067-051-10 |
| **Legal Description:** | see exhibit |
| **Legal Current Owner:** | Louie Helm living trust |
| **Property Identifiers:** | 126-020-03, 126-150-23 |
| **Comments:** | see exhibit |

**Deed 4:**

| | |
|---|---|
| Type of Deed: | Deed |
| Title is vested in: | Macon L Vanderburg & Marian Vanderburg |
| Title received from: | Macon L Vanderburg & Marian Vanderburg |
| Deed Dated | 12/9/1991 |
| Deed Recorded: | 12/17/1991 |
| Book: | NA |
| Page: | na |
| Volume: | na |
| Instrument: | na |
| Docket: | NA |
| Land Record Comments: | see exhibit |
| Miscellaneous Comments: | 126-150-13<br>old-067-420-13 |

| | |
|---|---|
| **Legal Description:** | see exhibit |
| **Legal Current Owner:** | Macon L Vanderburg & Marian Vanderburg |
| **Property Identifiers:** | 126-150-13 |
| **Comments:** | see exhibit |

**Deed 5:**

| | |
|---|---|
| Type of Deed: | Deed |
| Title is vested in: | Ronald P Mikulaco |
| Title received from: | Michael J Peters |
| Deed Dated | 1/6/2006 |
| Deed Recorded: | 1/18/2006 |
| Book: | na |
| Page: | na |
| Volume: | NA |
| Instrument: | na |
| Docket: | NA |
| Land Record Comments: | see exhibit |
| Miscellaneous Comments: | 126-150-15<br>old-067-420-15 |
| **Legal Description:** | see exhibit |
| **Legal Current Owner:** | Ronald P Mikulaco |
| **Property Identifiers:** | 126-150-15 |
| **Comments:** | see exhibit |

**Deed 6:**

| | |
|---|---|
| Type of Deed: | Deed |
| Title is vested in: | The Louis S & Joyce E Sherman Revocable Trust |
| Title received from: | The Louis S & Joyce E Sherman |
| Deed Dated | 5/3/1995 |
| Deed Recorded: | 10/7/2003 |
| Book: | NA |
| Page: | na |
| Volume: | NA |
| Instrument: | na |
| Docket: | na |
| Land Record Comments: | see exhibit |
| Miscellaneous Comments: | 126-150-21<br>old-067-420-21 |
| **Legal Description:** | see exhibit |
| **Legal Current Owner:** | The Louis S & Joyce E Sherman Revocable Trust |

# The EDR Environmental LienSearch™ Report

**Property Identifiers:** 126-150-21

**Comments:** see exhibit

**ENVIRONMENTAL LIEN**

Environmental Lien: Found ☐ Not Found ☒

**OTHER ACTIVITY AND USE LIMITATIONS (AULs)**

AULs: Found ☐ Not Found ☒

# Deed Exhibit 1

RECORDING REQUESTED BY

PLACER TITLE COMPANY

AND WHEN RECORDED MAIL TO*

MICHAEL J. PETERS AND BETTY L. PETERS
10 HEATHER LANE #214
LAHAINA, HI 96761

El Dorado, County Recorder
William Schultz Co Recorder Office
DOC- 2009-0036055-00
Acct 6-PLACER TITLE CO
Monday, JUL 20, 2009 14:37:22
Ttl Pd $15.00 Nbr-0001189650
JLB/C1/1-3

LOAN: **PETERS** OTHER: **204-26323** FILE: **PFI-087903 JAN**
INVESTOR LOAN #: A.P. NO. **115-080-04-100**

# TRUSTEE'S DEED UPON SALE

DOCUMENTARY TRANSFER TAX IS COMPUTED ON FULL VALUE LESS LIENS AND
ENCUMBRANCES REMAINING AT TIME OF SALE **$0.00**
AMOUNT OF CONSIDERATION **$523,422.66** R&T 11926
AMOUNT OF UNPAID DEBT **$523,422.66**
GRANTEE IS IDENTIFIED AS THE BENEFICIARY.

Declarant's Signature or Agent Determining Tax

**PLACER FORECLOSURE, INC**

Declarant's Name

**PLACER FORECLOSURE INC.** , Trustee, (whereas so designated in the Deed of Trust herein under more particularly described or as duly appointed Trustee), does hereby GRANT and CONVEY to **MICHAEL J. PETERS AND BETTY L. PETERS** (herein called Grantee), but without covenant or warranty, express or implied, all right, title and interest conveyed to and now held by it as Trustee under the Deed of Trust in and to the property situated in the **UNINCORPORATED AREA OF THE** County of **EL DORADO**, State of California, described as follows:

**SEE EXHIBIT "A", ATTACHED HERETO AND MADE A PART HEREOF.**

**APN: 115-080-04-100**

This conveyance is made in compliance with the terms and provisions of the Deed of Trust executed by **JAMES AZIZ AND AIMAD NEKRAWESH** and recorded on **06/09/2005**, in Book Page Instrument Number **2005-0047055-00** of Official records, in the office of the Recorder of **EL DORADO** County, California, under the authority and powers vested in the Trustee designated in the Deed of Trust or as the duly appointed Trustee, default having occurred under the Deed of Trust and pursuant to the Notice of Default and Election to Sell under the Deed of Trust recorded **09/04/2008**, in Book Page Instrument Number **2008-0043501** of Official records, Trustee having complied with all applicable statutory requirements of the State of California and performed all duties required by the Deed of Trust including sending of a Notice of Default and Election to SELL within 10 days after its recording and a Notice of Sale at least 20 days prior to the Sale Date by certified mail, postage pre-paid to each person entitled to notice in compliance with California Civil Code 2924b.

Notice of Trustee's Sale was published once a week for three consecutive weeks commencing **12/10/2008** in **MOUNTAIN DEMOCRAT**, a newspaper, and at least 20 days before the date fixed therein for sale a copy of the Notice of Trustee's Sale was posted in a conspicuous place on the property described above and in one public place in the city where the sale was to be held. At the time and place fixed in said notice, Trustee did, by public

* Mail tax bill to the above

036055

**TRUSTEE'S DEED UPON SALE**

**LOAN: PETERS** **OTHER: 204-26323** **FILE: PFI-087903 JAN**
**INVESTOR LOAN #:** **A.P. NUMBER 115-080-04-100**

announcement, and in said provided, postpone the sale from time to time thereafter and did sell the property described above on **12/31/2008** at public auction to the Grantee herein, Grantee being the highest qualified bidder therefor, for **$523,422.66** cash, lawful money of the United States, or by the satisfaction of the indebtedness then secured by said Deed of Trust.

In WITNESS WHEREOF, **PLACER FORECLOSURE INC.** , as the Trustee, has this day, **12/31/2008** caused its name to be hereunto affixed by its officer thereunto duly authorized by its Corporation By-Laws.

**PLACER FORECLOSURE INC.**, , as said Trustee

By _____
**RON ROBBINS, PRESIDENT**
**PLACER FORECLOSURE, INC., TRUSTEE**

By _____

STATE OF CALIFORNIA
COUNTY OF **PLACER**

On **12/31/2008** before me, Julie Clarke-Butcher a Notary Public personally appeared **RON ROBBINS, PRESIDENT**, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(~~ies~~), and that by his/~~her/their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

JULIE CLARKE-BUTCHER
COMM. #1747348
NOTARY PUBLIC • CALIFORNIA
PLACER COUNTY
Comm. Exp. MAY 27, 2011

WITNESS my hand and official seal.

Signature _____
**JULIE CLARKE-BUTCHER**

(Seal)

## EXHIBIT "A" - LEGAL DESCRIPTION

PARCEL NO. ONE:

ALL THAT PORTION OF LOT 2 OF THE NORTHWEST 1/4 OF SECTION 19, TOWNSHIP 10 NORTH, RANGE 9 EAST, M.D.B.&M., MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE WEST QUARTER CORNER OF SAID SECTION 19 AND RUNNING ALONG THE WESTERLY BOUNDARY OF SAID SECTION 19, NORTH 00 DEGREES 28' 45" WEST 877.82 FEET TO A POINT ON THE SOUTHERLY BOUNDARY OF THE GREEN VALLEY ROAD; THENCE ALONG THE SOUTHERLY BOUNDARY OF SAID ROAD SOUTH 48 DEGREES 11' 49" EAST 1298.00 FEET TO A POINT ON THE SOUTHERLY BOUNDARY OF SAID LOT 2; THENCE LEAVING SAID ROAD AND ALONG THE SOUTHERLY BOUNDARY OF SAID LOT 2, SOUTH 89 DEGREES 15 MINUTES 00 SECONDS WEST 961.59 FEET TO THE POINT OF BEGINNING.

PARCEL NO. TWO:

ALL THAT PORTION OF THE NORTHEAST 1/4 OF SECTION 24, TOWNSHIP 10 NORTH, RANGE 8 EAST, M.D.M. DESCRIBED AS FOLLOWS:

BEGINNING AT A 2 INCH DIAMETER CAPPED IRON PIPE STAMPED RCE 13409, MARKING THE EAST 1/4 CORNER OF SAID SECTION 24; THENCE FROM SAID POINT OF BEGINNING ALONG THE EASTERLY LINE OF SAID SECTION 24, NORTH 00 DEGREES 24 MINUTES 00 SECONDS WEST 342.10 FEET TO A 1 1/2 INCH DIAMETER CAPPED IRON PIPE SET AT THE SOUTHEASTERLY CORNER OF PARCEL 2 OF THAT CERTAIN PARCEL MAP ON FILE IN THE OFFICE OF THE RECORDER OF THE COUNTY OF EL DORADO, CALIFORNIA, IN BOOK 41 OF PARCEL MAPS, AT PAGE 3; THENCE ALONG THE SOUTHERLY LINE OF SAID PARCEL 2 NORTH 46 DEGREES 07 MINUTES 20 SECONDS WEST 12.01 TO A 3/4 INCH DIAMETER CAPPED IRON PIPE AND CONTINUING NORTH 46 DEGREES 07 MINUTES 20 SECONDS WEST 150.32 FEET; THENCE LEAVING SAID SOUTHERLY LINE SOUTH 10 DEGREES 26 MINUTES 38 SECONDS EAST 394.74 FEET; THENCE SOUTH 35 DEGREES 46 MINUTES 15 SECONDS EAST 81.84 FEET TO THE POINT OF BEGINNING.

PARCEL NO ONE AND PARCEL NO. TWO, ALSO SHOWN AS TRACT 1 ON THAT CERTAIN RECORD OF SURVEY FILED ON MAY 23, 2001, IN THE OFFICE OF THE COUNTY RECORDER OF EL DORADO COUNTY, IN BOOK 24 OF SURVEYS, AT PAGE 138.

ASSESSOR PARCEL NO. 115-080-04-100

# Deed Exhibit 2

RECORDING REQUESTED BY:

JENNY LOUIE-HELM

MAIL DEED TO:

JENNY LOUIE-HELM
46995 Ocotillo Court
Fremont, CA 94539-7204

MAIL TAX STMTS TO:

FAY LOUIE
P.O. BOX 14485
Fremont, Ca 94539-1185

El Dorado, County Recorder
William Schultz Co Recorder Office
DOC- 2004-0001131-00
Check Number 3580
Wednesday, JAN 07, 2004 08:57:24
Ttl Pd $10.00 Nbr-0000531240
AKB/C2/1-2

APN: 067-051-09-100
Address: Unimproved land in El Dorado Hills, CA (16.7% int)
7073 - 9th Avenue, El Dorado Hills

----------SPACE ABOVE THIS LINE FOR RECORDER'S USE----------

PCOS FILED

**GRANT DEED**

The undersigned grantor(s) declare(s):

Documentary transfer tax is $ NONE (Transfer to grantor revocable trust)
( ) computed on full value of property conveyed, or
( ) computed on full value less value of liens and encumbrances remaining at time of sale.
( ) Unincorporated area: ( ) City of _____
(X) Realty not sold

FOR NO CONSIDERATION, JENNY LOUIE-HELM (a.k.a. JENNY LOUIE), a married woman as her sole and separate property (who acquired title as a single woman),

hereby GRANT(S) to VERNE D. HELM and JENNY LOUIE-HELM as Trustees of the LOUIE-HELM LIVING TRUST (created by a Declaration of Trust dated November 15, 2003),

the real property situated in the Unincorporated Area of El Dorado Hills, County of El Dorado, State of California, and being more particularly described as follows:

PARCEL NO.1:

The West half of the Southeast quarter and the East half of the Southwest quarter of Section 24,

Township 10 North, Range 8 East, MDB&M.

EXCEPTING THEREFROM the East half of the Northwest quarter of the Southeast quarter of Section 24, Township 10, North, Range 8 East, MDB&M.

PARCEL NO. 2:

All that portion of the Southwest quarter of the Northeast quarter of Section 24, Township 10 North, Range 8 East, M.D.B.&M., more particularly described as follows:

COMMENCING at the Southeast corner of the Southwest quarter of the Northeast quarter of said Section 24 and thence running North 120 feet to stake No. 1; thence running Southwesterly 240 feet to stake No.2; thence 240 feet East to the point of commencement.

Dated: November 15, 2003

Jenny Louie-Helm
JENNY LOUIE-HELM
(a.k.a. JENNY LOUIE)

**ACKNOWLEDGMENT**

STATE OF CALIFORNIA )
) SS
COUNTY OF ALAMEDA )

On November 15, 2003, before me, the undersigned, a Notary Public in and for said State, personally appeared JENNY LOUIE-HELM, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature Wallis W. Lim
Wallis W. Lim, Notary Public

PC01 WALLIS W. LIM
COMM. #1434700
NOTARY PUBLIC-CALIFORNIA
SAN FRANCISCO COUNTY
My Comm. Expires Aug. 12, 2007 PC01

# Deed Exhibit 3

RECORDING REQUESTED BY:

JENNY LOUIE-HELM

MAIL DEED TO:

JENNY LOUIE-HELM
46995 Ocotillo Court
Fremont, CA 94539-7204



El Dorado, County Recorder
William Schultz Co Recorder Office
DOC- 2004-0001132-00
Check Number 3580
Wednesday, JAN 07, 2004 08:57:24
Ttl Pd $10.00 Nbr-0000531241
AKB/C2/1-2

MAIL TAX STMTS TO:

FAY LOUIE
P.O. BOX 14485
Fremont, Ca 94539-1185

APN: 067-420-14-100 and 067-051-10-100
Address: land in El Dorado County, CA (16.7% int)

----------SPACE ABOVE THIS LINE FOR RECORDER'S USE----------

**GRANT DEED**

PCOS FILED

The undersigned grantor(s) declare(s):

Documentary transfer tax is $ NONE (Transfer to grantor revocable trust)
( ) computed on full value of property conveyed, or
( ) computed on full value less value of liens and encumbrances remaining at time of sale.
( ) Unincorporated area: ( ) City of _____
(X) Realty not sold

FOR NO CONSIDERATION, JENNY LOUIE-HELM (a.k.a. JENNY HELM), a married woman as her sole and separate property (who acquired title as a single woman),

hereby GRANT(S) to VERNE D. HELM and JENNY LOUIE-HELM as Trustees of the LOUIE-HELM LIVING TRUST (created by a Declaration of Trust dated November 15, 2003),

the real property situated in the Unincorporated Area of El Dorado Hills, County of El Dorado, State of California, and being more particularly described as follows:

PARCEL ONE:

ALL THAT PORTION OF THE EAST 1/2 OF THE NORTHEAST 1/4 OF SECTION 24, TOWNSHIP 10 NORTH, RANGE 8 EAST, M.D.B.& M., LYING SOUTHWESTERLY OF GREEN VALLEY ROAD, AS SAID ROAD EXISTED ON JUNE 1, 1950

EXCEPT ANY PORTION THEREOF LYING WITHIN THAT PARCEL OF LAND DESCRIBED IN THE DEED TO THE COUNTY OF EL DORADO, DATED NOVEMBER 14, 1960 IN BOOK 531 OF OFFICIAL RECORDS, PAGE 15, EL DORADO COUNTY RECORDS.

Parcel Number: 067-420-14-100
Address: 1856 Green Valley Road, El Dorado Hills, CA

PARCEL TWO:

THE EAST HALF OF THE SOUTHEAST QUARTER OF SECTION 24, TOWNSHIP 10 NORTH, RANGE 8 EAST, M.D.B. & M

Parcel Number: 067-051-10-100
Address: Unimproved Land in El Dorado Hills, CA

Dated: November 15, 2003

Jenny Louie-Helm
JENNY LOUIE-HELM
(a.k.a. JENNY HELM)

**ACKNOWLEDGMENT**

STATE OF CALIFORNIA )
) SS
COUNTY OF ALAMEDA )

On November 15, 2003, before me, the undersigned, a Notary Public in and for said State, personally appeared JENNY LOUIE-HELM, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature Wallis W. Lim
Wallis W. Lim, Notary Public

PC01 WALLIS W. LIM
COMM. #1434700
NOTARY PUBLIC-CALIFORNIA
SAN FRANCISCO COUNTY
My Comm. Expires Aug. 12, 2007 PC01

01/07/2004,20040001132

# Deed Exhibit 4

72999

RECORDING REQUESTED BY

INTER-COUNTY TITLE CO.

AND WHEN RECORDED MAIL TO

Name
Street Address
City & State

Mr. & Mrs. M. Vanderburg
1768 Green Valley Rd.
El Dorado Hills, CA 95630

EL DORADO COUNTY, CALIF.
RECORD REQUESTED BY:
Inter-County Title Co.
91 DEC 17 AM 9:08
LORETA "JUAN" BELL
COUNTY RECORDER - CLERK

5.00 (1)

SPACE ABOVE THIS LINE FOR RECORDER'S USE

PCOS FILED

The undersigned grantor(s) declare(s):
Documentary transfer tax is $ 0.00
( ) computed on full value of property conveyed, or
( ) computed on full value less value of liens and encumbrances remaining at time of sale.

APN No. 067-420-13

# Grant Deed

ORDER NO. 174783-MJK

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,
MACON L. VANDERBURG AND MARIAN VANDERBURG, husband and wife who acquired title as LEE VANDERBURG and MARIAN VANDERBURG, husband and wife, as joint tenants

hereby GRANT(S) to
MACON L. VANDERBURG AND MARIAN VANDERBURG, husband and wife as joint tenants

the following described real property in the unincorporated area
County of El Dorado, State of California:

All that portion of the West half of the Northeast quarter of Section 24, Township 10 North, Range 8 East, M.D.B.&M., more particularly described as follows:

BEGINNING at the Northeast corner of said West half of the Northeast quarter from which the North quarter corner of said Section 24 bears South 89° 50' 27" West 1331.01 feet; thence from said point of beginning South 0° 05' 32" West 1239.60 feet to a point; thence North 82° 52' 31" West 312.35 feet; thence North 0° 05' 32" East 1200.00 feet to the North line of said Section; and thence North 89° 50' 27" East 310.00 feet to the point of beginning.

SAVING AND EXCEPTING THEREFROM, any portion thereof lying North of the centerline of Green Valley Road.

Dated December 9, 1991

Macon L. Vanderburg

Marian Vanderburg

Marian Vanderburg

STATE OF CALIFORNIA
COUNTY OF El Dorado } SS
on December 9, 1991 before me, the undersigned, a Notary Public in and for said State, personally appeared Macon L. Vanderburg + Marian Vanderburg
~~personally known to me, or~~ proved to me on the basis of satisfactory evidence, to be the person S whose name S are subscribed to the within instrument and acknowledged that they executed the same.
WITNESS my hand and official seal.

Signature Marilyn J. Kitt
Marilyn J. Kitt

OFFICIAL SEAL
MARILYN J. KITT
NOTARY PUBLIC - CALIFORNIA
ORANGE COUNTY
My Comm. Expires Feb. 10, 1992

CT-1D

Mail Tax Statements to Return Address Above

BOOK 3684 PAGE 201

# Deed Exhibit 5

RECORDING REQUESTED BY

PLACER TITLE COMPANY

Escrow Number: 205-10511-BAS

**AND WHEN RECORDED MAIL TO**

RONALD P. MIKULAO
1840 Green Valley Rd.
El Dorado Hills, CA 95762

El Dorado, County Recorder
William Schultz Co Recorder Office
**DOC- 2006-0003566-00**
Acct 6-PLACER TITLE CO
Wednesday, JAN 18, 2006 14:30:00
Ttl Pd $10.00 Nbr-0000822060
CLG/C1/1-2

SPACE ABOVE THIS LINE FOR RECORDER'S USE

# GRANT DEED

The undersigned grantor(s) declare(s): THIS DEED IS GIVEN IN CONNECTION WITH THAT CERTAIN UNRECORDED LEASE OPTION AGREEMENT DATED MAY 19, 2003.
Documentary transfer tax is $0.00 City Transfer Tax: $0.00 11911
(X) computed on full value of property conveyed, or
() computed on full value less value of liens and encumbrances remaining at time of sale.

PCOS FILED

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, **MICHAEL J. PETERS, A MARRIED MAN, AS HIS SOLE AND SEPARATE PROPERTY**

Hereby GRANT(S) to MICHAEL J. PETERS, A MARRIED MAN AS HIS SOLE AND SEPARATE **PROPERTY AND RONALD P. MIKULAO, AN UNMARRIED MAN, AS TENANTS IN COMMON**

THE LAND DESCRIBED HEREIN IS SITUATED IN THE STATE OF CALIFORNIA, COUNTY OF EL DORADO, UNINCORPORATED AREA, AND IS DESCRIBED AS FOLLOWS:

ALL THAT PORTION OF THE EAST HALF OF THE NORTHEAST QUARTER OF SECTION 24, TOWNSHIP 10 NORTH, RANGE 8 EAST, M.D.B.&M., DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE NORTHEASTERLY LINE OF THE GREEN VALLEY ROAD, AS SAID ROAD EXISTED ON JUNE 1, 1950, FROM WHICH THE NORTHEAST CORNER OF SAID SECTION 24 BEARS NORTH 48 DEGREES 10' 20" EAST 462.79 FEET; NORTH 0 DEGREES 10' 20" WEST 976.29 FEET AND NORTH 89 DEGREES 33' EAST 422.11 FEET; THENCE FROM SAID POINT OF BEGINNING, NORTH 48 DEGREES 10' 20" EAST 160.00 FEET, MORE OR LESS, TO THE MOST SOUTHERLY CORNER OF THAT PARCEL OF LAND CONVEYED TO THE COUNTY OF EL DORADO BY DEED RECORDED IN BOOK 531 AT PAGE 15, OFFICIAL RECORDS OF EL DORADO COUNTY; THENCE ALONG THE SOUTHWESTERLY LINE OF SAID LAST NAMED PARCEL NORTH 47 DEGREES 59' 52" WEST 611.31 FEET TO THE POINT IN THE GREEN VALLEY ROAD AS SAID ROAD EXISTED ON JUNE 1, 1950; THENCE ALONG SAID ROAD, SOUTHEASTERLY 600.0 FEET MORE OR LESS, TO THE POINT OF BEGINNING.

ASSESSORS PARCEL NO.: 067-420-15-100

Dated: January 06, 2006

**MAIL TAX STATEMENTS TO PARTY SHOWN ON FOLLOWING LINE; IF NO PARTY SHOWN, MAIL AS DIRECTED ABOVE**

**SAME AS ABOVE**

Name Street Address City & State

003566

**SIGNATURE PAGE FOR GRANT DEED**

By: _____
MICHAEL J. PETERS

STATE OF ~~CALIFORNIA~~ Hawaii,
COUNTY OF Maui

On January 13 2006 before me, Vicki Kinkella, Notary Public,
personally appeared Michael J. Peters

personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument

WITNESS my hand and official seal.

Signature: _____
Commission Expiration Date: _____

VICKI KINKELLA
My commission expires 6/27/08

VICKI KINKELLA NOTARY PUBLIC STATE OF HAWAII

**MAIL TAX STATEMENTS TO PARTY SHOWN ON FOLLOWING LINE; IF NO PARTY SHOWN, MAIL AS DIRECTED ABOVE**

**SAME AS ABOVE**

Name | Street Address | City & State



O:\Granddeed.doc (4/2002)

01/18/2006,20060003566

# Deed Exhibit 6

RECORDING REQUESTED BY: )
)
LOUIS S. SHERMAN )
JOYCE E. SHERMAN )
1880 Green Valley Road )
El Dorado Hlls, CA 95762)
)
WHEN RECORDED, MAIL TO: )
SAME AS ABOVE )
MAIL TAX STATEMENTS TO: )
SAME AS ABOVE

El Dorado, County Recorder
William Schultz Co Recorder Office
DOC- 2003-0103611-00
Check Number 4751
Tuesday, OCT 07, 2003 08:07:11
Ttl Pd $10.00 Nbr-0000495095
AKB/C2/1-2

SPACE FOR RECORDER'S USE

PCOS FILED

THIS FORM FURNISHED BY LIVING TRUST DOCUMENTS

# QUITCLAIM DEED

NOTICE: NO CONSIDERATION. DOCUMENTARY TAX = 0. R & T 11911 (GIFT)

We, LOUIS S. SHERMAN and JOYCE E. SHERMAN, do hereby remise, release and forever quitclaim unto LOUIS S. SHERMAN and JOYCE E. SHERMAN, Trustees of THE LOUIS S. and JOYCE E. SHERMAN REVOCABLE LIVING TRUST, whose trustee(s) and successor trustee(s) are also named in that instrument known as the CERTIFIED ABSTRACT OF TRUST AGREEMENT of said trust agreement, further identified as EXHIBIT "A", attached hereto and made a part hereof, the following described real property in the County of El Dorado, State of California:

A PORTION OF THE NORTHEAST 1/4 OF SECTION 24, TOWNSHIP 10 NORTH, RANGE 8 EAST M.D.B.& M. DESCRIBED AS FOLLOWS:

PARCEL 1, AS SHOWN ON THE PARCEL MAP, FILED AUGUST 21, 1989 IN BOOK 41, OF PARCEL MAPS AT PAGE 3, EL DORADO COUNTY RECORDS.

APN: 067-420-21-1-0

TRUST DATED: MAY 3, 1995

Louis Sherman
LOUIS S. SHERMAN

Joyce E Sherman
JOYCE E. SHERMAN

State of California ) ss.
County of El Dorado )

ON October 1, 2003, BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC, PERSONALLY APPEARED LOUIS S. SHERMAN and JOYCE E. SHERMAN, PERSONALLY KNOWN TO ME OR PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE TO BE THE PERSONS WHOSE NAMES ARE SUBSCRIBED TO THIS INSTRUMENT AND ACKNOWLEDGE THAT THEY EXECUTED THE SAME IN THEIR AUTHORIZED CAPACITY, AND THAT BY THEIR SIGNATURES ON THE INSTRUMENT THE PERSONS, OR THE ENTITY UPON BEHALF OF WHICH THE PERSONS ACTED, EXECUTED THE INSTRUMENT.

WITNESS BY MY HAND AND OFFICIAL SEAL.

JEFFREY D. ASTON
COMM. # 1371176
NOTARY PUBLIC-CALIFORNIA
SACRAMENTO COUNTY
COMM. EXP. AUG. 20, 2006

NOTARY PUBLIC
My Commission Expires: 8-20-2006

JEFFREY D. ASTON
COMM. # 1371176
NOTARY PUBLIC-CALIFORNIA
SACRAMENTO COUNTY
COMM. EXP. AUG. 20, 2006

***EXHIBIT "A"***
***CERTIFIED ABSTRACT OF TRUST AGREEMENT***
***LOUIS S. SHERMAN and JOYCE E. SHERMAN***

State of California )
) ss.
County of El Dorado )

The UNDERSIGNED, being duly sworn, deposes and certifies:

1. Declaration of Trust is entitled ***THE LOUIS S. and JOYCE E. SHERMAN REVOCABLE LIVING TRUST.***

Settlor and Trustee: ***LOUIS S. SHERMAN***
Settlor and Trustee: ***JOYCE E. SHERMAN***
Co-successor Trustee: ***MARY SALVADOR***
Co-successor Trustee: ***KATHRYN E. HOUSER***
Co-successor Trustee: ***THOMAS A. WOLD***

Settlors and Trustees executed a Declaration of Trust and that said Declaration of Trust is not of record in any court.

2. That the present beneficiaries under the terms of said Declaration of Trust are the Settlors so long as one or both are living and the Settlor's children or other as designated in the Declaration of Trust.

3. That the power and authority of the trustees with respect to the trust property include, by way of illustration, the following:

A. To exercise without notice, hearing, confirmation or approval of any Court, each and every power enumerated in the trustee's powers of the settlors' Domicile State's Probate Code laws in effect at the date of this agreement unless otherwise stated in this Declaration of Trust.

B. To sell, convey, exchange, partition, divide, lease, pledge for security, and exercise all the rights, powers and privileges which an absolute owner of the same property would have regarding any property, which in his or her discretion the Trustee chooses to receive subject to this Declaration of Trust and subject to the settlors' Domicile State's laws with respect to community property and quasi-community property.

4. Settlors are empowered to designate trustees and Successor trustees, and have appointed ***MARY SALVADOR, KATHRYN E. HOUSER*** and ***THOMAS A. WOLD***, as co-successor trustees, and should any of the named co-successor trustees become unable because of death, incapacity, or any other cause to serve before the natural termination of all the trust(s), then the remaining shall serve as the co-successor trustees or the remaining successor trustee.

However, should the above succession become unable to serve as trustee because of death, incapacity or any other cause, a trustee shall be chosen by the majority of beneficiaries by right of representation, if applicable. The issue of any deceased beneficiary shall collectively have only one (1) vote with a parent or legal guardian voting for minor beneficiaries.

The Settlors reserve the right to appoint other trustees or Successor trustees and to remove any trustee or trustees from office at any time while they both shall live. Unless otherwise stated in writing by the Settlors, the trustees and successor trustees of the Declaration of Trust shall be considered to be those mentioned above.

***"END OF EXHIBIT A"***

10/07/2003,20030103611

**APPENDIX B**

EDR Radius Map Report with GeoCheck®
EDR Aerial Photo Decade Package
EDR Historical Topographic Map Report
EDR–City Directory Abstract
EDR Certified Sanborn Map Report (No Coverage)

**Dixon Ranch**
Green Valley Road
El Dorado Hills, CA 95762

Inquiry Number: 3002996.2s
March 01, 2011

# The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

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***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.


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# EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

## TARGET PROPERTY INFORMATION

### ADDRESS

GREEN VALLEY ROAD
EL DORADO HILLS, CA 95762

### COORDINATES

| | |
|---|---|
| Latitude (North): | 38.705900 - 38° 42' 21.2'' |
| Longitude (West): | 121.047200 - 121° 2' 49.9'' |
| Universal Tranverse Mercator: | Zone 10 |
| UTM X (Meters): | 669805.8 |
| UTM Y (Meters): | 4285743.5 |
| Elevation: | 1124 ft. above sea level |

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

| | |
|---|---|
| Target Property Map: | 38121-F1 CLARKSVILLE, CA |
| Most Recent Revision: | 1980 |

### AERIAL PHOTOGRAPHY IN THIS REPORT

| | |
|---|---|
| Portions of Photo from: | 2006, 2005 |
| Source: | USDA |

## TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

## DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

## STANDARD ENVIRONMENTAL RECORDS

### *Federal NPL site list*

NPL ---------- National Priority List

# EXECUTIVE SUMMARY

Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

***Federal Delisted NPL site list***

Delisted NPL ---------- National Priority List Deletions

***Federal CERCLIS list***

CERCLIS ---------- Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY ---------- Federal Facility Site Information listing

***Federal CERCLIS NFRAP site List***

CERC-NFRAP ---------- CERCLIS No Further Remedial Action Planned

***Federal RCRA CORRACTS facilities list***

CORRACTS ---------- Corrective Action Report

***Federal RCRA non-CORRACTS TSD facilities list***

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

***Federal RCRA generators list***

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

***Federal institutional controls / engineering controls registries***

US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

***Federal ERNS list***

ERNS ---------- Emergency Response Notification System

***State- and tribal - equivalent NPL***

RESPONSE ---------- State Response Sites

***State and tribal landfill and/or solid waste disposal site lists***

SWF/LF ---------- Solid Waste Information System

***State and tribal leaking storage tank lists***

LUST ---------- Geotracker's Leaking Underground Fuel Tank Report
SLIC ---------- Statewide SLIC Cases
INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land

***State and tribal registered storage tank lists***

UST ---------- Active UST Facilities

AST ---------- Aboveground Petroleum Storage Tank Facilities
INDIAN UST ---------- Underground Storage Tanks on Indian Land
FEMA UST ---------- Underground Storage Tank Listing

***State and tribal voluntary cleanup sites***

VCP ---------- Voluntary Cleanup Program Properties
INDIAN VCP ---------- Voluntary Cleanup Priority Listing

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Local Brownfield lists***

US BROWNFIELDS ---------- A Listing of Brownfields Sites

***Local Lists of Landfill / Solid Waste Disposal Sites***

DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
ODI ---------- Open Dump Inventory
WMUDS/SWAT ---------- Waste Management Unit Database
SWRCY ---------- Recycler Database
HAULERS ---------- Registered Waste Tire Haulers Listing
INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands

***Local Lists of Hazardous waste / Contaminated Sites***

US CDL ---------- Clandestine Drug Labs
HIST Cal-Sites ---------- Historical Calsites Database
SCH ---------- School Property Evaluation Program
Toxic Pits ---------- Toxic Pits Cleanup Act Sites
CDL ---------- Clandestine Drug Labs
US HIST CDL ---------- National Clandestine Laboratory Register

***Local Lists of Registered Storage Tanks***

CA FID UST ---------- Facility Inventory Database
HIST UST ---------- Hazardous Substance Storage Container Database
SWEEPS UST ---------- SWEEPS UST Listing

***Local Land Records***

LIENS 2 ---------- CERCLA Lien Information
LUCIS ---------- Land Use Control Information System
LIENS ---------- Environmental Liens Listing
DEED ---------- Deed Restriction Listing

***Records of Emergency Release Reports***

HMIRS ---------- Hazardous Materials Information Reporting System
CHMIRS ---------- California Hazardous Material Incident Report System
LDS ---------- Land Disposal Sites Listing
MCS ---------- Military Cleanup Sites Listing

***Other Ascertainable Records***

RCRA-NonGen ---------- RCRA - Non Generators

# EXECUTIVE SUMMARY

| | |
|---|---|
| DOT OPS | Incident and Accident Data |
| DOD | Department of Defense Sites |
| FUDS | Formerly Used Defense Sites |
| CONSENT | Superfund (CERCLA) Consent Decrees |
| ROD | Records Of Decision |
| UMTRA | Uranium Mill Tailings Sites |
| MINES | Mines Master Index File |
| TRIS | Toxic Chemical Release Inventory System |
| TSCA | Toxic Substances Control Act |
| FTTS | FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) |
| HIST FTTS | FIFRA/TSCA Tracking System Administrative Case Listing |
| SSTS | Section 7 Tracking Systems |
| ICIS | Integrated Compliance Information System |
| PADS | PCB Activity Database System |
| MLTS | Material Licensing Tracking System |
| RADINFO | Radiation Information Database |
| FINDS | Facility Index System/Facility Registry System |
| RAATS | RCRA Administrative Action Tracking System |
| CA BOND EXP. PLAN | Bond Expenditure Plan |
| WDS | Waste Discharge System |
| Cortese | "Cortese" Hazardous Waste & Substances Sites List |
| HIST CORTESE | Hazardous Waste & Substance Site List |
| Notify 65 | Proposition 65 Records |
| DRYCLEANERS | Cleaner Facilities |
| WIP | Well Investigation Program Case List |
| EMI | Emissions Inventory Data |
| INDIAN RESERV | Indian Reservations |
| SCRD DRYCLEANERS | State Coalition for Remediation of Drycleaners Listing |
| HWP | EnviroStor Permitted Facilities Listing |
| HWT | Registered Hazardous Waste Transporter Database |
| COAL ASH EPA | Coal Combustion Residues Surface Impoundments List |
| FINANCIAL ASSURANCE | Financial Assurance Information Listing |
| PCB TRANSFORMER | PCB Transformer Registration Database |
| PROC | Certified Processors Database |
| MWMP | Medical Waste Management Program Listing |
| COAL ASH DOE | Sleam-Electric Plan Operation Data |

**EDR PROPRIETARY RECORDS**

***EDR Proprietary Records***

| | |
|---|---|
| Manufactured Gas Plants | EDR Proprietary Manufactured Gas Plants |

**SURROUNDING SITES: SEARCH RESULTS**

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

# EXECUTIVE SUMMARY

## STANDARD ENVIRONMENTAL RECORDS

### *State- and tribal - equivalent CERCLIS*

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 11/08/2010 has revealed that there is 1 ENVIROSTOR site within approximately 1.5 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| SANFORD RANCH<br>Status: Refer: Other Agency | 2321 GREENVALLEY ROAD | ESE 1/2 - 1 (0.932 mi.) | 4 | 8 |

## ADDITIONAL ENVIRONMENTAL RECORDS

### *Other Ascertainable Records*

NPDES: A listing of NPDES permits, including stormwater.

A review of the NPDES list, as provided by EDR, and dated 11/22/2010 has revealed that there are 2 NPDES sites within approximately 0.5 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| SCOTT RESIDENCE | 2070 W GREEN SPRINGS RD | N 1/4 - 1/2 (0.413 mi.) | 2 | 7 |
| 1801 GREENVALLEY RD | 1801 GREENVALLEY RD | NNE 1/4 - 1/2 (0.499 mi.) | 3 | 8 |

HAZNET: The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000-1,000,000 annually, representing approximately 350,000-500,000 shipments. Data from non-California manifests & continuation sheets are not included at the present time. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, & disposal method. The source is the Department of Toxic Substance Control is the agency

A review of the HAZNET list, as provided by EDR, and dated 12/31/2009 has revealed that there is 1 HAZNET site within approximately 0.5 miles of the target property.

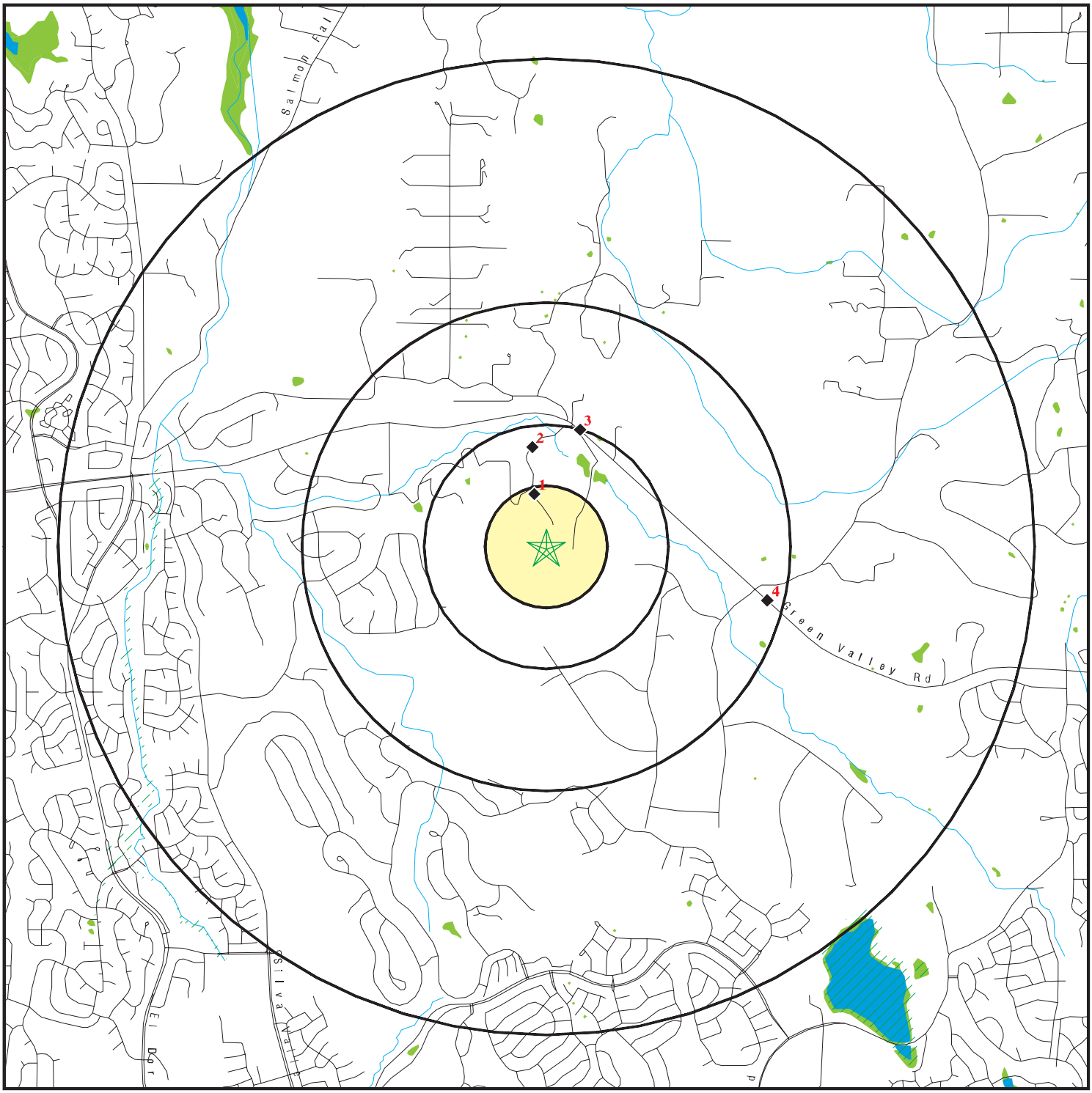
| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| 1X RAMOS ENVIRONMENTAL | 3141 VERDE VALLE LANE | NNW 1/8 - 1/4 (0.221 mi.) | 1 | 7 |

# EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 13 records.

| Site Name | Database(s) |
|---|---|
| GREEN VALLEY RD WIDENING COUNTY LI | NPDES |
| US HWY 50 HOV LANES PHASE 1 | NPDES |
| GREEN VALLEY RD INTERS IMPROV AT S | NPDES |
| ED HILLS VILLAGE MINI STORAGE | NPDES |
| BELL RANCH | NPDES |
| SILVER SPRINGS BASS LAKE RD RC ALI | NPDES |
| GREEN VALLEY MARKETPLACE | NPDES |
| VILLA LAGO AT THE PROMONTORY | NPDES |
| RIDGEVIEW VILLAVE EST UNIT 3 | NPDES |
| HOLIDAY INN | NPDES |
| SILVA VALLEY PARKWAY WATER MAIN PR | NPDES |
| LATROBE RD EL DORADO HILLS BLVD U | NPDES |
| LOTUS ROAD SPOILS PILE | NPDES |

# OVERVIEW MAP - 3002996.2s




0 1/2 1 2 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

| | |
|---|---|
| SITE NAME: Dixon Ranch<br>ADDRESS: Green Valley Road<br>El Dorado Hills CA 95762<br>LAT/LONG: 38.7059 / 121.0472 | CLIENT: Youngdahl Consulting Group<br>CONTACT: Laurie Israel<br>INQUIRY #: 3002996.2s<br>DATE: March 01, 2011 3:51 pm |

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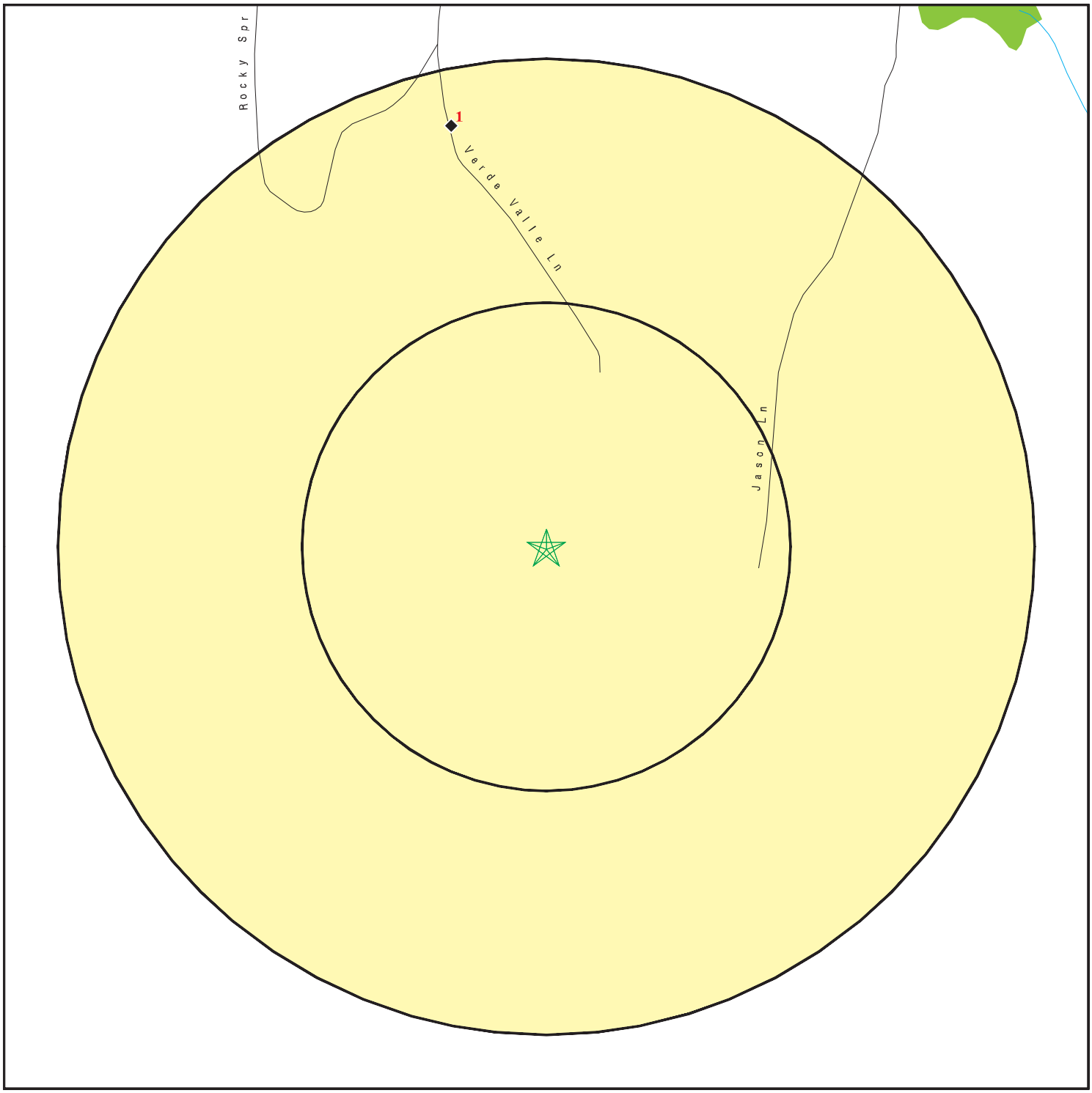
# DETAIL MAP - 3002996.2s




- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites

0 1/16 1/8 1/4 Miles

- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

| | |
|---|---|
| SITE NAME: Dixon Ranch<br>ADDRESS: Green Valley Road<br>El Dorado Hills CA 95762<br>LAT/LONG: 38.7059 / 121.0472 | CLIENT: Youngdahl Consulting Group<br>CONTACT: Laurie Israel<br>INQUIRY #: 3002996.2s<br>DATE: March 01, 2011 3:52 pm |

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# MAP FINDINGS SUMMARY

| Database | Target Property | Search Distance (Miles) | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| **STANDARD ENVIRONMENTAL RECORDS** | | | | | | | | |
| ***Federal NPL site list*** | | | | | | | | |
| NPL | | 1.500 | 0 | 0 | 0 | 0 | 0 | 0 |
| Proposed NPL | | 1.500 | 0 | 0 | 0 | 0 | 0 | 0 |
| NPL LIENS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| ***Federal Delisted NPL site list*** | | | | | | | | |
| Delisted NPL | | 1.500 | 0 | 0 | 0 | 0 | 0 | 0 |
| ***Federal CERCLIS list*** | | | | | | | | |
| CERCLIS | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| FEDERAL FACILITY | | 1.500 | 0 | 0 | 0 | 0 | 0 | 0 |
| ***Federal CERCLIS NFRAP site List*** | | | | | | | | |
| CERC-NFRAP | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| ***Federal RCRA CORRACTS facilities list*** | | | | | | | | |
| CORRACTS | | 1.500 | 0 | 0 | 0 | 0 | 0 | 0 |
| ***Federal RCRA non-CORRACTS TSD facilities list*** | | | | | | | | |
| RCRA-TSDF | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| ***Federal RCRA generators list*** | | | | | | | | |
| RCRA-LQG | | 0.750 | 0 | 0 | 0 | 0 | NR | 0 |
| RCRA-SQG | | 0.750 | 0 | 0 | 0 | 0 | NR | 0 |
| RCRA-CESQG | | 0.750 | 0 | 0 | 0 | 0 | NR | 0 |
| ***Federal institutional controls / engineering controls registries*** | | | | | | | | |
| US ENG CONTROLS | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| US INST CONTROL | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| ***Federal ERNS list*** | | | | | | | | |
| ERNS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| ***State- and tribal - equivalent NPL*** | | | | | | | | |
| RESPONSE | | 1.500 | 0 | 0 | 0 | 0 | 0 | 0 |
| ***State- and tribal - equivalent CERCLIS*** | | | | | | | | |
| ENVIROSTOR | | 1.500 | 0 | 0 | 0 | 1 | 0 | 1 |
| ***State and tribal landfill and/or solid waste disposal site lists*** | | | | | | | | |
| SWF/LF | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| ***State and tribal leaking storage tank lists*** | | | | | | | | |
| LUST | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| SLIC | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |

# MAP FINDINGS SUMMARY

| Database | Target Property | Search Distance (Miles) | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| INDIAN LUST | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| ***State and tribal registered storage tank lists*** | | | | | | | | |
| UST | | 0.750 | 0 | 0 | 0 | 0 | NR | 0 |
| AST | | 0.750 | 0 | 0 | 0 | 0 | NR | 0 |
| INDIAN UST | | 0.750 | 0 | 0 | 0 | 0 | NR | 0 |
| FEMA UST | | 0.750 | 0 | 0 | 0 | 0 | NR | 0 |
| ***State and tribal voluntary cleanup sites*** | | | | | | | | |
| VCP | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| INDIAN VCP | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| **ADDITIONAL ENVIRONMENTAL RECORDS** | | | | | | | | |
| ***Local Brownfield lists*** | | | | | | | | |
| US BROWNFIELDS | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| ***Local Lists of Landfill / Solid Waste Disposal Sites*** | | | | | | | | |
| DEBRIS REGION 9 | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| ODI | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| WMUDS/SWAT | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| SWRCY | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| HAULERS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| INDIAN ODI | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| ***Local Lists of Hazardous waste / Contaminated Sites*** | | | | | | | | |
| US CDL | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| HIST Cal-Sites | | 1.500 | 0 | 0 | 0 | 0 | 0 | 0 |
| SCH | | 0.750 | 0 | 0 | 0 | 0 | NR | 0 |
| Toxic Pits | | 1.500 | 0 | 0 | 0 | 0 | 0 | 0 |
| CDL | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| US HIST CDL | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| ***Local Lists of Registered Storage Tanks*** | | | | | | | | |
| CA FID UST | | 0.750 | 0 | 0 | 0 | 0 | NR | 0 |
| HIST UST | | 0.750 | 0 | 0 | 0 | 0 | NR | 0 |
| SWEEPS UST | | 0.750 | 0 | 0 | 0 | 0 | NR | 0 |
| ***Local Land Records*** | | | | | | | | |
| LIENS 2 | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| LUCIS | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| LIENS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| DEED | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| ***Records of Emergency Release Reports*** | | | | | | | | |
| HMIRS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| CHMIRS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| LDS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |

# MAP FINDINGS SUMMARY

| Database | Target Property | Search Distance (Miles) | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| MCS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| ***Other Ascertainable Records*** | | | | | | | | |
| RCRA-NonGen | | 0.750 | 0 | 0 | 0 | 0 | NR | 0 |
| DOT OPS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| DOD | | 1.500 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUDS | | 1.500 | 0 | 0 | 0 | 0 | 0 | 0 |
| CONSENT | | 1.500 | 0 | 0 | 0 | 0 | 0 | 0 |
| ROD | | 1.500 | 0 | 0 | 0 | 0 | 0 | 0 |
| UMTRA | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| MINES | | 0.750 | 0 | 0 | 0 | 0 | NR | 0 |
| TRIS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| TSCA | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| FTTS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| HIST FTTS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| SSTS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| ICIS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| PADS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| MLTS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| RADINFO | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| FINDS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| RAATS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| CA BOND EXP. PLAN | | 1.500 | 0 | 0 | 0 | 0 | 0 | 0 |
| WDS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| NPDES | | 0.500 | 0 | 0 | 2 | NR | NR | 2 |
| Cortese | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| HIST CORTESE | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| Notify 65 | | 1.500 | 0 | 0 | 0 | 0 | 0 | 0 |
| DRYCLEANERS | | 0.750 | 0 | 0 | 0 | 0 | NR | 0 |
| WIP | | 0.750 | 0 | 0 | 0 | 0 | NR | 0 |
| HAZNET | | 0.500 | 0 | 1 | 0 | NR | NR | 1 |
| EMI | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| INDIAN RESERV | | 1.500 | 0 | 0 | 0 | 0 | 0 | 0 |
| SCRD DRYCLEANERS | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| HWP | | 1.500 | 0 | 0 | 0 | 0 | 0 | 0 |
| HWT | | 0.750 | 0 | 0 | 0 | 0 | NR | 0 |
| COAL ASH EPA | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| FINANCIAL ASSURANCE | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| PCB TRANSFORMER | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| PROC | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| MWMP | | 0.750 | 0 | 0 | 0 | 0 | NR | 0 |
| COAL ASH DOE | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| **EDR PROPRIETARY RECORDS** | | | | | | | | |
| ***EDR Proprietary Records*** | | | | | | | | |
| Manufactured Gas Plants | | 1.500 | 0 | 0 | 0 | 0 | 0 | 0 |

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

**1**
**NNW**
**1/8-1/4**
**0.221 mi.**
**1167 ft.**

**1X RAMOS ENVIRONMENTAL** **HAZNET** **S103947582**
**3141 VERDE VALLE LANE** **N/A**
**EL DORADO HILLS, CA 95762**

**Relative:**
**Lower**

**Actual:**
**1101 ft.**

HAZNET:

| | |
|---|---|
| Gepaid: | CAC001072096 |
| Contact: | CORPORATION |
| Telephone: | 0000000000 |
| Facility Addr2: | Not reported |
| Mailing Name: | Not reported |
| Mailing Address: | 3141 VERDE VALLE LANE |
| Mailing City,St,Zip: | EL DORADO HILLS, CA 957620000 |
| Gen County: | 9 |
| TSD EPA ID: | CAD044003556 |
| TSD County: | Yolo |
| Waste Category: | Oil/water separation sludge |
| Disposal Method: | Transfer Station |
| Tons: | .1042 |
| Facility County: | 9 |

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**2**
**North**
**1/4-1/2**
**0.413 mi.**
**2180 ft.**

**SCOTT RESIDENCE** **NPDES** **S109457645**
**2070 W GREEN SPRINGS RD** **N/A**
**EL DORADO, CA 95762**

**Relative:**
**Lower**

**Actual:**
**1004 ft.**

NPDES:

| | |
|---|---|
| Npdes Number: | Not reported |
| Facility Status: | Active |
| Agency Id: | 484849 |
| Region: | 5S |
| Regulatory Measure Id: | 351921 |
| Order No: | 99-08DWQ |
| Regulatory Measure Type: | Storm water construction |
| Place Id: | 725940 |
| WDID: | 5S09C353342 |
| Program Type: | CONSTW |
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | 9/9/2008 2:47:05 PM |
| Expiration Date Of Regulatory Measure: | Not reported |
| Termination Date Of Regulatory Measure: | Not reported |
| Discharge Name: | Seth W Scott |
| Discharge Address: | Not reported |
| Discharge City: | Not reported |
| Discharge State: | Not reported |
| Discharge Zip: | Not reported |

**3**
**NNE**
**1/4-1/2**
**0.499 mi.**
**2637 ft.**

**1801 GREENVALLEY RD**
**1801 GREENVALLEY RD**
**EL DORADO, CA 95762**

**NPDES** **S109434188**
**N/A**

**Relative:**
**Lower**

**Actual:**
**977 ft.**

NPDES:

| | |
|---|---|
| Npdes Number: | Not reported |
| Facility Status: | Terminated |
| Agency Id: | 180404 |
| Region: | 5S |
| Regulatory Measure Id: | 267306 |
| Order No: | 99-08DWQ |
| Regulatory Measure Type: | Storm water construction |
| Place Id: | 608112 |
| WDID: | 5S09C335530 |
| Program Type: | CONSTW |
| Adoption Date Of Regulatory Measure: | Not reported |
| Effective Date Of Regulatory Measure: | 7/19/2005 |
| Expiration Date Of Regulatory Measure: | Not reported |
| Termination Date Of Regulatory Measure: | 5/6/2008 |
| Discharge Name: | Albert Romo |
| Discharge Address: | Not reported |
| Discharge City: | Not reported |
| Discharge State: | Not reported |
| Discharge Zip: | Not reported |

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**4**
**ESE**
**1/2-1**
**0.932 mi.**
**4918 ft.**

**SANFORD RANCH**
**2321 GREENVALLEY ROAD**
**RESCUE, CA 95672**

**ENVIROSTOR** **S102860834**
**N/A**

**Relative:**
**Lower**

**Actual:**
**1084 ft.**

ENVIROSTOR:

| | |
|---|---|
| Site Type: | Evaluation |
| Site Type Detailed: | Evaluation |
| Acres: | 1 |
| NPL: | NO |
| Regulatory Agencies: | NONE SPECIFIED |
| Lead Agency: | NONE SPECIFIED |
| Program Manager: | Not reported |
| Supervisor: | Referred - Not Assigned |
| Division Branch: | Cleanup Sacramento |
| Facility ID: | 9020002 |
| Site Code: | Not reported |
| Assembly: | 4 |
| Senate: | 1 |
| Special Program: | * Rural County Survey Program |
| Status: | Refer: Other Agency |
| Status Date: | 11/16/1994 |
| Restricted Use: | NO |
| Site Mgmt. Req.: | NONE SPECIFIED |
| Funding: | Not reported |
| Latitude: | 38.701549497435103 |
| Longitude: | -121.027323027469 |
| APN: | NONE SPECIFIED |
| Past Use: | NONE SPECIFIED |
| Potential COC: | Not reported |
| Confirmed COC: | NONE SPECIFIED |
| Potential Description: | NONE SPECIFIED |

**SANFORD RANCH (Continued)** **S102860834**

Alias Name: Not reported
Alias Type: Not reported

Completed Info:
Completed Area Name: Not reported
Completed Sub Area Name: Not reported
Completed Document Type: Not reported
Completed Date: Not reported
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

Count: 13 records. ORPHAN SUMMARY

| City | EDR ID | Site Name | Site Address | Zip | Database(s) |
|---|---|---|---|---|---|
| EL DORADO | S109444947 | GREEN VALLEY RD WIDENING COUNTY LI | GREEN VALLEY RD | 95762 | NPDES |
| EL DORADO HILLS | S109463627 | US HWY 50 HOV LANES PHASE 1 | HWY 50 EL DORADO HILLS TO BASS | 95762 | NPDES |
| EL DORADO HILLS | S109444945 | GREEN VALLEY RD INTERS IMPROV AT S | GREEN VALLEY RD AT SILVA VALLE | 95762 | NPDES |
| EL DORADO HILLS | S109442495 | ED HILLS VILLAGE MINI STORAGE | GREEN VALLEY / HIDDEN ACRES | 95762 | NPDES |
| EL DORADO HILLS | S109437259 | BELL RANCH | MORRISON ROAD | | NPDES |
| EL DORADO HILLS | S109458351 | SILVER SPRINGS BASS LAKE RD RC ALI | S OF GREEN VALLEY RD N OF HILL | | NPDES |
| EL DORADO HILLS | S109444943 | GREEN VALLEY MARKETPLACE | NE OF INT FRANCISCO DR / GRE | 95672 | NPDES |
| EL DORADO HILLS | S109464231 | VILLA LAGO AT THE PROMONTORY | SE OF SOFIA PKWY / GREEN VAL | 95762 | NPDES |
| EL DORADO HILLS | S109456000 | RIDGEVIEW VILLAVE EST UNIT 3 | N OF HWY 50 S OF GREEN VALLEY | 95762 | NPDES |
| EL DORADO HILLS | S109446025 | HOLIDAY INN | SOUTH OF HWY 50 / EAST OF PO | 95762 | NPDES |
| EL DORADO HILLS | S109458327 | SILVA VALLEY PARKWAY WATER MAIN PR | SILVA VALLEY PARKWAY BTW GREEN | 95762 | NPDES |
| EL DORADO HILLS | S109448325 | LATROBE RD EL DORADO HILLS BLVD U | ROUTE U S 50 INT AT EL DORADO | 95762 | NPDES |
| PLACERVILLE | S109449169 | LOTUS ROAD SPOILS PILE | EAST OF LOTUS ROAD NORTH OF GR | 95672 | NPDES |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Number of Days to Update:** Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

**STANDARD ENVIRONMENTAL RECORDS**

***Federal NPL site list***

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 01/13/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 15

Source: EPA
Telephone: N/A
Last EDR Contact: 01/13/2011
Next Scheduled EDR Contact: 04/25/2011
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 01/13/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 15

Source: EPA
Telephone: N/A
Last EDR Contact: 01/13/2011
Next Scheduled EDR Contact: 04/25/2011
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 02/14/2011
Next Scheduled EDR Contact: 05/30/2011
Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

***Federal Delisted NPL site list***

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 01/13/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 15

Source: EPA
Telephone: N/A
Last EDR Contact: 01/13/2011
Next Scheduled EDR Contact: 04/25/2011
Data Release Frequency: Quarterly

***Federal CERCLIS list***

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 11/30/2010
Date Data Arrived at EDR: 12/30/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 57

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 03/01/2011
Next Scheduled EDR Contact: 06/13/2011
Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPAa??s Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 12/10/2010
Date Data Arrived at EDR: 01/11/2011
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 01/11/2011
Next Scheduled EDR Contact: 04/25/2011
Data Release Frequency: Varies

***Federal CERCLIS NFRAP site List***

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 10/28/2010
Date Data Arrived at EDR: 12/01/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 86

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 03/01/2011
Next Scheduled EDR Contact: 06/13/2011
Data Release Frequency: Quarterly

***Federal RCRA CORRACTS facilities list***

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 05/25/2010
Date Data Arrived at EDR: 06/02/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 124

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 02/14/2011
Next Scheduled EDR Contact: 05/30/2011
Data Release Frequency: Quarterly

***Federal RCRA non-CORRACTS TSD facilities list***

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 01/06/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Quarterly

***Federal RCRA generators list***

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 01/06/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 01/06/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 01/06/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Varies

***Federal institutional controls / engineering controls registries***

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 01/05/2011
Date Data Arrived at EDR: 01/14/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 12/10/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 01/05/2011
Date Data Arrived at EDR: 01/14/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 12/10/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Varies

***Federal ERNS list***

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 07/09/2010
Date Data Arrived at EDR: 07/09/2010
Date Made Active in Reports: 08/17/2010
Number of Days to Update: 39

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 01/07/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Annually

***State- and tribal - equivalent NPL***

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 11/08/2010
Date Data Arrived at EDR: 12/17/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 39

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/08/2011
Next Scheduled EDR Contact: 05/23/2011
Data Release Frequency: Quarterly

***State- and tribal - equivalent CERCLIS***

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 11/08/2010
Date Data Arrived at EDR: 12/17/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 39

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/08/2011
Next Scheduled EDR Contact: 05/23/2011
Data Release Frequency: Quarterly

***State and tribal landfill and/or solid waste disposal site lists***

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 11/22/2010
Date Data Arrived at EDR: 11/23/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 63

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 02/22/2011
Next Scheduled EDR Contact: 06/06/2011
Data Release Frequency: Quarterly

***State and tribal leaking storage tank lists***

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 12/22/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 12/10/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 12/10/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 01/03/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Quarterly

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 12/06/2010
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 05/17/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 12/16/2010
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: No Update Planned

LUST: Geotracker's Leaking Underground Fuel Tank Report

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 12/16/2010
Date Data Arrived at EDR: 12/16/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 43

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 02/04/2011
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Quarterly

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 01/17/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: Varies

SLIC: Statewide SLIC Cases

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 12/16/2010
Date Data Arrived at EDR: 12/16/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 43

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 02/04/2011
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 12/16/2010
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 01/17/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 01/03/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 12/10/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 02/14/2011
Next Scheduled EDR Contact: 02/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 02/14/2011
Next Scheduled EDR Contact: 05/30/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 12/10/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 02/07/2011
Next Scheduled EDR Contact: 05/23/2011
Data Release Frequency: Annually

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 11/12/2010
Date Data Arrived at EDR: 11/12/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 77
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 09/01/2010
Date Data Arrived at EDR: 11/05/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 84
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 02/03/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 11/16/2010
Date Data Arrived at EDR: 11/19/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 70
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Quarterly

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 11/04/2010
Date Data Arrived at EDR: 11/05/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 84
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 08/27/2010
Date Data Arrived at EDR: 08/30/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 35
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 02/16/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Semi-Annually

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 11/19/2010
Date Data Arrived at EDR: 11/19/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 70
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 11/04/2009
Date Data Arrived at EDR: 05/04/2010
Date Made Active in Reports: 07/07/2010
Number of Days to Update: 64
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/04/2010
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Varies

***State and tribal registered storage tank lists***

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 12/16/2010
Date Data Arrived at EDR: 12/16/2010
Date Made Active in Reports: 01/20/2011
Number of Days to Update: 35
Source: SWRCB
Telephone: 916-480-1028
Last EDR Contact: 02/04/2011
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
Registered Aboveground Storage Tanks.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 09/10/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 21
Source: State Water Resources Control Board
Telephone: 916-341-5712
Last EDR Contact: 01/10/2011
Next Scheduled EDR Contact: 04/25/2011
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 11/12/2010
Date Data Arrived at EDR: 11/12/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 77
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 11/19/2010
Date Data Arrived at EDR: 11/19/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 70
Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 11/16/2010
Date Data Arrived at EDR: 11/19/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 70
Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 11/01/2010
Date Data Arrived at EDR: 12/02/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 57
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 02/03/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 11/10/2010
Date Data Arrived at EDR: 12/01/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 58

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 02/11/2010
Date Data Arrived at EDR: 02/11/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 60

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 08/27/2010
Date Data Arrived at EDR: 08/30/2010
Date Made Active in Reports: 10/04/2010
Number of Days to Update: 35

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 02/16/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 09/01/2010
Date Data Arrived at EDR: 11/05/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 84

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 02/03/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Varies

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 01/17/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: Varies

***State and tribal voluntary cleanup sites***

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 11/08/2010
Date Data Arrived at EDR: 12/17/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 39

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/08/2011
Next Scheduled EDR Contact: 05/23/2011
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 04/02/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 01/05/2010
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Varies

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Local Brownfield lists***

US BROWNFIELDS: A Listing of Brownfields Sites
Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 06/24/2010
Date Data Arrived at EDR: 06/25/2010
Date Made Active in Reports: 08/17/2010
Number of Days to Update: 53

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 12/30/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: Semi-Annually

***Local Lists of Landfill / Solid Waste Disposal Sites***

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 12/22/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: No Update Planned

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 02/14/2011
Next Scheduled EDR Contact: 05/30/2011
Data Release Frequency: Quarterly

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 11/18/2010
Date Data Arrived at EDR: 12/23/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 36

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 12/23/2010
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 11/22/2010
Date Data Arrived at EDR: 11/23/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 63

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 02/22/2011
Next Scheduled EDR Contact: 06/06/2011
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 02/08/2011
Next Scheduled EDR Contact: 05/23/2011
Data Release Frequency: Varies

***Local Lists of Hazardous waste / Contaminated Sites***

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 12/03/2010
Date Data Arrived at EDR: 12/30/2010
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 48

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 12/08/2010
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: Quarterly

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 11/08/2010
Date Data Arrived at EDR: 12/17/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 39

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/08/2011
Next Scheduled EDR Contact: 05/23/2011
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 08/19/2010
Date Data Arrived at EDR: 08/23/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 37

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 02/22/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

***Local Lists of Registered Storage Tanks***

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/23/2009
Date Data Arrived at EDR: 09/23/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 8
Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 12/06/2010
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database
The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18
Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWEEPS UST: SWEEPS UST Listing
Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35
Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

***Local Land Records***

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 11/09/2010
Date Data Arrived at EDR: 11/16/2010
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 92
Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Varies

LUCIS: Land Use Control Information System
LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31
Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 02/22/2011
Next Scheduled EDR Contact: 06/06/2011
Data Release Frequency: Varies

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 12/08/2010
Date Data Arrived at EDR: 12/09/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 47
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/17/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: Varies

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 12/14/2010
Date Data Arrived at EDR: 12/14/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 42

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 12/14/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Semi-Annually

***Records of Emergency Release Reports***

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 01/05/2011
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 51

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 01/05/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Annually

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/21/2010
Date Made Active in Reports: 08/20/2010
Number of Days to Update: 30

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Varies

LDS: Land Disposal Sites Listing

The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units.

Date of Government Version: 12/16/2010
Date Data Arrived at EDR: 12/16/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 40

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 02/04/2011
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing

The State Water Resources Control Board and nine Regional Water Quality Control Boards partner with the Department of Defense (DoD) through the Defense and State Memorandum of Agreement (DSMOA) to oversee the investigation and remediation of water quality issues at military facilities.

Date of Government Version: 12/16/2010
Date Data Arrived at EDR: 12/16/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 40

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 02/04/2011
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Quarterly

***Other Ascertainable Records***

RCRA-NonGen: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 01/06/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 10/13/2010
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 02/11/2011
Next Scheduled EDR Contact: 05/23/2011
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 01/21/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 08/12/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 112

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 12/13/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 10/01/2010
Date Data Arrived at EDR: 10/29/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 91

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 01/03/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 02/03/2011
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 22

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 02/03/2011
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/21/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 99

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 11/29/2010
Next Scheduled EDR Contact: 03/14/2011
Data Release Frequency: Varies

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/04/2010
Date Data Arrived at EDR: 09/09/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 84

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 12/29/2010
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 01/13/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 36

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 03/01/2011
Next Scheduled EDR Contact: 06/13/2011
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 64

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 12/29/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 02/28/2011
Next Scheduled EDR Contact: 06/13/2011
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 02/28/2011
Next Scheduled EDR Contact: 06/13/2011
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 04/24/2010
Date Data Arrived at EDR: 04/29/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 18

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 12/23/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/01/2010
Date Data Arrived at EDR: 11/10/2010
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 98

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 01/21/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/18/2010
Date Data Arrived at EDR: 04/06/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 51

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 12/13/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/11/2011
Date Data Arrived at EDR: 01/13/2011
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 01/13/2011
Next Scheduled EDR Contact: 04/25/2011
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/14/2010
Date Data Arrived at EDR: 04/16/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 41

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 12/10/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 02/25/2010
Date Made Active in Reports: 05/12/2010
Number of Days to Update: 76

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 03/01/2011
Next Scheduled EDR Contact: 06/13/2011
Data Release Frequency: Biennially

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 02/28/2011
Next Scheduled EDR Contact: 06/13/2011
Data Release Frequency: Quarterly

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 11/22/2010
Date Data Arrived at EDR: 11/23/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 66

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 02/22/2011
Next Scheduled EDR Contact: 06/06/2011
Data Release Frequency: Quarterly

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites). This listing is no longer updated by the state agency.

Date of Government Version: 01/04/2011
Date Data Arrived at EDR: 01/05/2011
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 20

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 01/05/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES].

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

NOTIFY 65: Proposition 65 Records

Proposition 65 Notification Records. NOTIFY 65 contains facility notifications about any release which could impact drinking water and thereby expose the public to a potential health risk.

Date of Government Version: 10/21/1993
Date Data Arrived at EDR: 11/01/1993
Date Made Active in Reports: 11/19/1993
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 12/22/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: No Update Planned

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 09/15/2010
Date Data Arrived at EDR: 09/16/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 13

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 12/13/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Annually

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 01/03/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/07/2010
Date Made Active in Reports: 08/12/2010
Number of Days to Update: 36

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 01/19/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 10/18/2010
Number of Days to Update: 19

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 12/30/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 01/21/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 08/31/2010
Date Data Arrived at EDR: 09/01/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 92

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 02/22/2011
Next Scheduled EDR Contact: 05/09/2011
Data Release Frequency: Varies

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 11/17/2010
Date Data Arrived at EDR: 12/23/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 36
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 12/23/2010
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 12/09/2010
Date Data Arrived at EDR: 12/17/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 39
Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 12/14/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Varies

COAL ASH DOE: Sleam-Electric Plan Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 01/18/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 11/09/2009
Date Data Arrived at EDR: 12/18/2009
Date Made Active in Reports: 02/10/2010
Number of Days to Update: 54
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 12/21/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Varies

HWT: Registered Hazardous Waste Transporter Database
A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 01/17/2011
Date Data Arrived at EDR: 01/18/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 10
Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 01/18/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: Quarterly

HWP: EnviroStor Permitted Facilities Listing
Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 08/09/2010
Date Data Arrived at EDR: 08/11/2010
Date Made Active in Reports: 08/20/2010
Number of Days to Update: 9
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 12/10/2010
Next Scheduled EDR Contact: 02/21/2011
Data Release Frequency: Quarterly

FINANCIAL ASSURANCE 2: Financial Assurance Information Listing
A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 09/27/2010
Date Data Arrived at EDR: 09/28/2010
Date Made Active in Reports: 10/18/2010
Number of Days to Update: 20

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 02/22/2011
Next Scheduled EDR Contact: 06/06/2011
Data Release Frequency: Varies

FINANCIAL ASSURANCE: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 03/01/2007
Date Data Arrived at EDR: 06/01/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 28

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 02/04/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands
Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 01/21/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: N/A

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 01/01/2008
Date Data Arrived at EDR: 02/18/2009
Date Made Active in Reports: 05/29/2009
Number of Days to Update: 100

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 02/04/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Varies

**EDR PROPRIETARY RECORDS**

***EDR Proprietary Records***

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

**COUNTY RECORDS**

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/06/2011
Date Data Arrived at EDR: 01/07/2011
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 18

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 01/03/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 01/06/2011
Date Data Arrived at EDR: 01/07/2011
Date Made Active in Reports: 01/20/2011
Number of Days to Update: 13

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 01/03/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

Site List

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 11/22/2010
Date Data Arrived at EDR: 11/23/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 63

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 02/22/2011
Next Scheduled EDR Contact: 05/23/2011
Data Release Frequency: Semi-Annually

FRESNO COUNTY:

CUPA Resources List

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 01/14/2011
Date Data Arrived at EDR: 01/18/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 10

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 01/17/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: Semi-Annually

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing

Kern County Sites and Tanks Listing.

Date of Government Version: 08/31/2010
Date Data Arrived at EDR: 09/01/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 29

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 02/28/2011
Next Scheduled EDR Contact: 05/30/2011
Data Release Frequency: Quarterly

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 12/22/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: No Update Planned

HMS: Street Number List

Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 10/28/2010
Date Data Arrived at EDR: 12/14/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 42

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 01/17/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities

Solid Waste Facilities in Los Angeles County.

Date of Government Version: 10/25/2010
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 11/17/2010
Number of Days to Update: 21

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 01/24/2011
Next Scheduled EDR Contact: 05/09/2011
Data Release Frequency: Varies

City of Los Angeles Landfills

Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/05/2009
Date Data Arrived at EDR: 03/10/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 29

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 02/18/2011
Next Scheduled EDR Contact: 06/06/2011
Data Release Frequency: Varies

Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 02/09/2010
Date Data Arrived at EDR: 02/12/2010
Date Made Active in Reports: 03/04/2010
Number of Days to Update: 20

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 10/25/2010
Next Scheduled EDR Contact: 05/09/2011
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 10/26/2010
Date Data Arrived at EDR: 11/01/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 17

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 01/24/2011
Next Scheduled EDR Contact: 05/06/2011
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/28/2003
Date Data Arrived at EDR: 10/23/2003
Date Made Active in Reports: 11/26/2003
Number of Days to Update: 34

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 10/22/2010
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 22

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 01/17/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: Semi-Annually

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 10/28/2010
Date Data Arrived at EDR: 11/16/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 2

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 01/10/2011
Next Scheduled EDR Contact: 04/25/2011
Data Release Frequency: Semi-Annually

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 07/09/2008
Date Data Arrived at EDR: 07/09/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 22

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 12/06/2010
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 12/06/2010
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: No Update Planned

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 11/03/2010
Date Data Arrived at EDR: 11/19/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 70

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/14/2011
Next Scheduled EDR Contact: 05/30/2011
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 11/03/2010
Date Data Arrived at EDR: 11/19/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 70

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/14/2011
Next Scheduled EDR Contact: 05/30/2011
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 11/03/2010
Date Data Arrived at EDR: 11/19/2010
Date Made Active in Reports: 01/20/2011
Number of Days to Update: 62
Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/15/2011
Next Scheduled EDR Contact: 05/30/2011
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 09/13/2010
Date Data Arrived at EDR: 09/14/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 15
Source: Placer County Health and Human Services
Telephone: 530-889-7312
Last EDR Contact: 12/13/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 12/08/2010
Date Data Arrived at EDR: 12/09/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 50
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/09/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 12/08/2010
Date Data Arrived at EDR: 12/09/2010
Date Made Active in Reports: 01/20/2011
Number of Days to Update: 42
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/09/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 11/03/2010
Date Data Arrived at EDR: 01/20/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 8
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 01/10/2011
Next Scheduled EDR Contact: 04/25/2011
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 11/03/2010
Date Data Arrived at EDR: 01/20/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 8
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 01/10/2011
Next Scheduled EDR Contact: 04/25/2011
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 12/08/2010
Date Data Arrived at EDR: 12/09/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 50

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 02/14/2011
Next Scheduled EDR Contact: 05/30/2011
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 09/09/2010
Date Data Arrived at EDR: 09/15/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 14

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 12/21/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/01/2010
Date Data Arrived at EDR: 11/16/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 70

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 01/31/2011
Next Scheduled EDR Contact: 05/16/2011
Data Release Frequency: Varies

Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 12/21/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 02/28/2011
Next Scheduled EDR Contact: 05/30/2011
Data Release Frequency: Quarterly

Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/29/2010
Date Data Arrived at EDR: 12/14/2010
Date Made Active in Reports: 01/20/2011
Number of Days to Update: 37
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 02/28/2011
Next Scheduled EDR Contact: 05/30/2011
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 12/29/2010
Date Data Arrived at EDR: 01/04/2011
Date Made Active in Reports: 01/20/2011
Number of Days to Update: 16
Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 12/23/2010
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: Semi-Annually

SAN MATEO COUNTY:

Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 11/22/2010
Date Data Arrived at EDR: 11/23/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 66
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 02/14/2011
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 12/17/2010
Date Data Arrived at EDR: 12/20/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 39
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 12/17/2010
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Semi-Annually

SANTA CLARA COUNTY:

HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22
Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 05/29/2009
Date Data Arrived at EDR: 06/01/2009
Date Made Active in Reports: 06/15/2009
Number of Days to Update: 14
Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 12/06/2010
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: Annually

Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 08/31/2009
Date Data Arrived at EDR: 08/31/2009
Date Made Active in Reports: 09/18/2009
Number of Days to Update: 18
Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 02/28/2011
Next Scheduled EDR Contact: 05/30/2011
Data Release Frequency: Annually

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 12/08/2010
Date Data Arrived at EDR: 12/17/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 42
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 12/06/2010
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 12/08/2010
Date Data Arrived at EDR: 12/29/2010
Date Made Active in Reports: 01/20/2011
Number of Days to Update: 22
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 12/06/2010
Next Scheduled EDR Contact: 03/21/2011
Data Release Frequency: Quarterly

SONOMA COUNTY:

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 01/05/2011
Date Data Arrived at EDR: 01/07/2011
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 21
Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 01/03/2011
Next Scheduled EDR Contact: 04/18/2011
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 12/13/2010
Date Data Arrived at EDR: 12/14/2010
Date Made Active in Reports: 01/20/2011
Number of Days to Update: 37
Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 12/13/2010
Next Scheduled EDR Contact: 03/28/2011
Data Release Frequency: Semi-Annually

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 10/26/2010
Date Data Arrived at EDR: 11/30/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 59

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 02/22/2011
Next Scheduled EDR Contact: 06/06/2011
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 10/05/2009
Date Made Active in Reports: 10/13/2009
Number of Days to Update: 8

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 01/10/2011
Next Scheduled EDR Contact: 04/25/2011
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 02/22/2011
Next Scheduled EDR Contact: 06/06/2011
Data Release Frequency: Quarterly

Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 11/29/2010
Date Data Arrived at EDR: 12/20/2010
Date Made Active in Reports: 01/20/2011
Number of Days to Update: 31

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 12/20/2010
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 10/05/2010
Date Data Arrived at EDR: 10/15/2010
Date Made Active in Reports: 11/18/2010
Number of Days to Update: 34

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 01/10/2011
Next Scheduled EDR Contact: 04/11/2011
Data Release Frequency: Annually

**OTHER DATABASE(S)**

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 08/26/2009
Date Made Active in Reports: 09/11/2009
Number of Days to Update: 16

Source: Department of Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 02/25/2011
Next Scheduled EDR Contact: 06/06/2011
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/22/2010
Date Made Active in Reports: 08/26/2010
Number of Days to Update: 35

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 01/21/2011
Next Scheduled EDR Contact: 05/02/2011
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 10/28/2010
Date Data Arrived at EDR: 11/09/2010
Date Made Active in Reports: 12/17/2010
Number of Days to Update: 38

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 02/09/2011
Next Scheduled EDR Contact: 05/23/2011
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 12/01/2009
Date Made Active in Reports: 12/14/2009
Number of Days to Update: 13

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 02/18/2011
Next Scheduled EDR Contact: 06/06/2011
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/19/2010
Date Made Active in Reports: 08/26/2010
Number of Days to Update: 38

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/28/2011
Next Scheduled EDR Contact: 06/13/2011
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/06/2010
Date Made Active in Reports: 07/26/2010
Number of Days to Update: 20

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 12/16/2010
Next Scheduled EDR Contact: 04/04/2011
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: Rextag Strategies Corp.
Telephone: (281) 769-2247
U.S. Electric Transmission and Power Plants Systems Digital GIS Data

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2009 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

**STREET AND ADDRESS INFORMATION**

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# GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

**TARGET PROPERTY ADDRESS**

DIXON RANCH
GREEN VALLEY ROAD
EL DORADO HILLS, CA 95762

**TARGET PROPERTY COORDINATES**

| | |
|---|---|
| Latitude (North): | 38.70590 - 38° 42' 21.2'' |
| Longitude (West): | 121.0472 - 121° 2' 49.9'' |
| Universal Tranverse Mercator: | Zone 10 |
| UTM X (Meters): | 669805.8 |
| UTM Y (Meters): | 4285743.5 |
| Elevation: | 1124 ft. above sea level |

**USGS TOPOGRAPHIC MAP**

| | |
|---|---|
| Target Property Map: | 38121-F1 CLARKSVILLE, CA |
| Most Recent Revision: | 1980 |

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**GROUNDWATER FLOW DIRECTION INFORMATION**

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

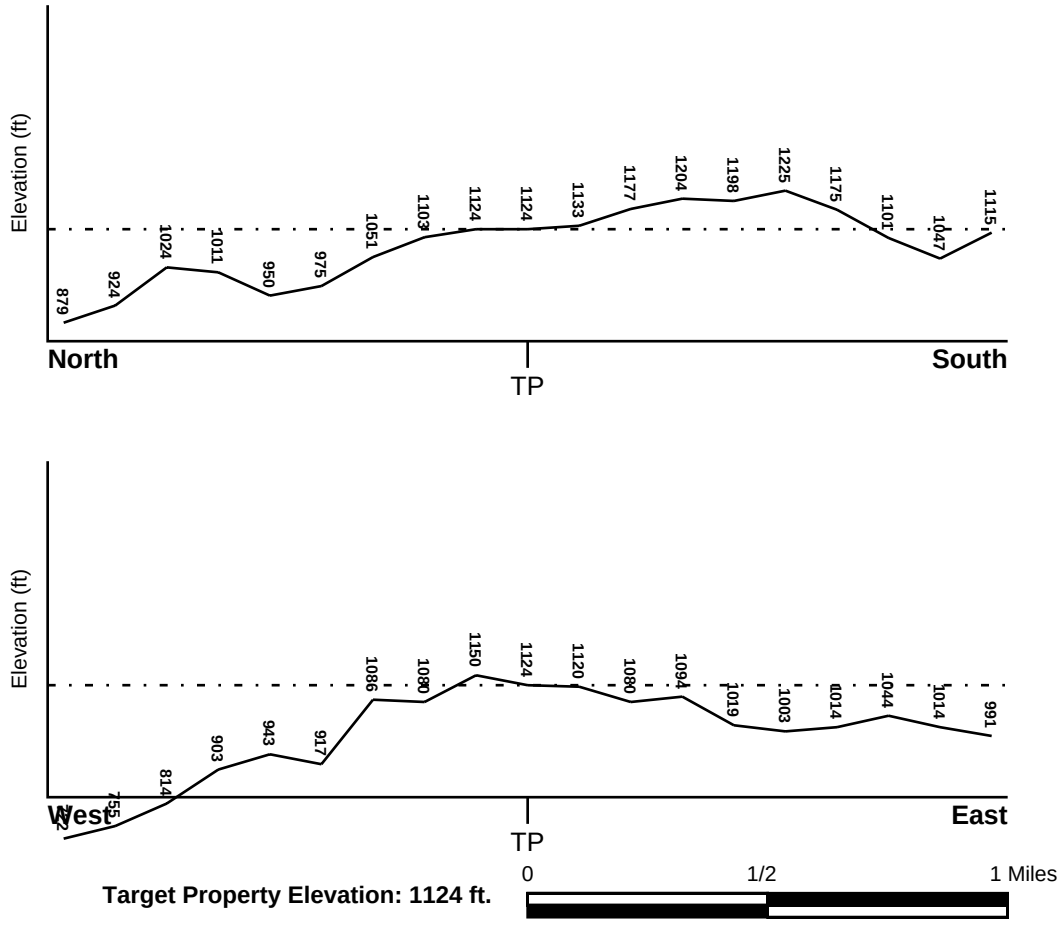
**TOPOGRAPHIC INFORMATION**

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

**TARGET PROPERTY TOPOGRAPHY**

General Topographic Gradient: General North

**SURROUNDING TOPOGRAPHY: ELEVATION PROFILES**




Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**HYDROLOGIC INFORMATION**

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

**FEMA FLOOD ZONE**

| Target Property County | FEMA Flood Electronic Data |
|---|---|
| EL DORADO, CA | YES - refer to the Overview Map and Detail Map |

Flood Plain Panel at Target Property: 06017C - FEMA DFIRM Flood data

Additional Panels in search area: Not Reported

**NATIONAL WETLAND INVENTORY**

| NWI Quad at Target Property | NWI Electronic Data Coverage |
|---|---|
| CLARKSVILLE | YES - refer to the Overview Map and Detail Map |

**HYDROGEOLOGIC INFORMATION**

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

***Site-Specific Hydrogeological Data*:***

| | |
|---|---|
| Search Radius: | 1.25 miles |
| Status: | Not found |

**AQUIFLOW®**

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

| MAP ID | LOCATION FROM TP | GENERAL DIRECTION GROUNDWATER FLOW |
|---|---|---|
| Not Reported | | |

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**GROUNDWATER FLOW VELOCITY INFORMATION**

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

**GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY**

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

**ROCK STRATIGRAPHIC UNIT**

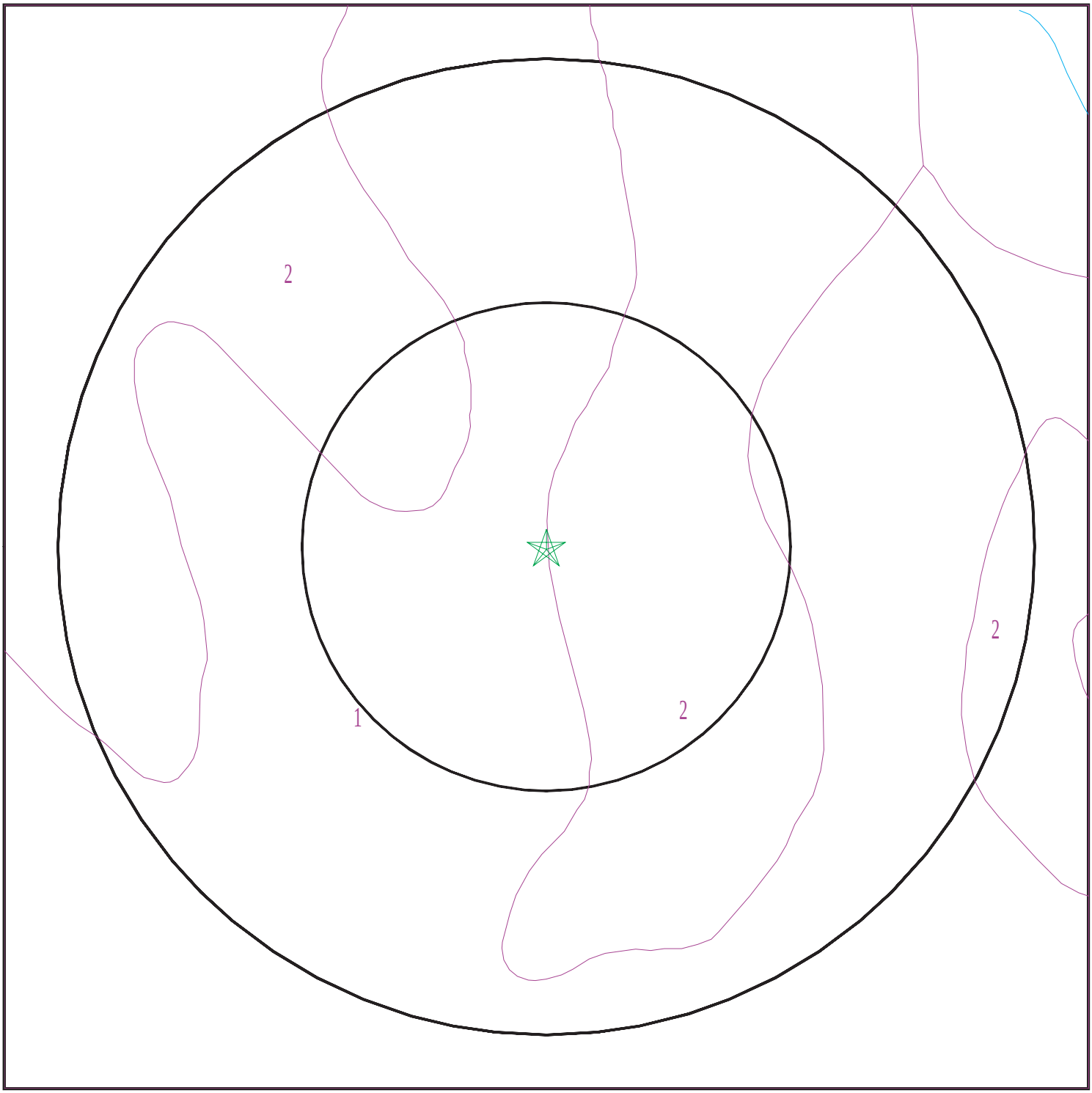
| | |
|---|---|
| Era: | Mesozoic |
| System: | Jurassic |
| Series: | Jurassic |
| Code: | Jg *(decoded above as Era, System & Series)* |

**GEOLOGIC AGE IDENTIFICATION**

Category: Jurassic granitic rocks

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

# SSURGO SOIL MAP - 3002996.2s




Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

| | | | |
|---|---|---|---|
| SITE NAME: | Dixon Ranch | CLIENT: | Youngdahl Consulting Group |
| ADDRESS: | Green Valley Road | CONTACT: | Laurie Israel |
| | El Dorado Hills CA 95762 | INQUIRY #: | 3002996.2s |
| LAT/LONG: | 38.7059 / 121.0472 | DATE: | March 01, 2011 3:53 pm |

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# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY**

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

---

**Soil Map ID: 1**

Soil Component Name: AUBURN

Soil Surface Texture: silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 48 inches

Depth to Watertable Min: > 0 inches

| Soil Layer Information | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Boundary | | | Classification | | Saturated hydraulic conductivity micro m/sec | Soil Reaction (pH) |
| Layer | Upper | Lower | Soil Texture Class | AASHTO Group | Unified Soil | | |
| 1 | 0 inches | 14 inches | silt loam | Not reported | Not reported | Max:<br>Min: | Max: Min: |
| 2 | 14 inches | 18 inches | unweathered bedrock | Not reported | Not reported | Max:<br>Min: | Max: Min: |

---

**Soil Map ID: 2**

Soil Component Name: AUBURN

Soil Surface Texture: silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 48 inches

Depth to Watertable Min: > 0 inches

| Soil Layer Information | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Boundary | | | Classification | | Saturated hydraulic conductivity micro m/sec | Soil Reaction (pH) |
| Layer | Upper | Lower | Soil Texture Class | AASHTO Group | Unified Soil | | |
| 1 | 0 inches | 14 inches | silt loam | Not reported | Not reported | Max:<br>Min: | Max: Min: |
| 2 | 14 inches | 18 inches | unweathered bedrock | Not reported | Not reported | Max:<br>Min: | Max: Min: |

**LOCAL / REGIONAL WATER AGENCY RECORDS**

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

**WELL SEARCH DISTANCE INFORMATION**

| DATABASE | SEARCH DISTANCE (miles) |
|---|---|
| Federal USGS | 1.000 |
| Federal FRDS PWS | Nearest PWS within 1 mile |
| State Database | 1.000 |

**FEDERAL USGS WELL INFORMATION**

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| No Wells Found | | |

**FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION**

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| No PWS System Found | | |

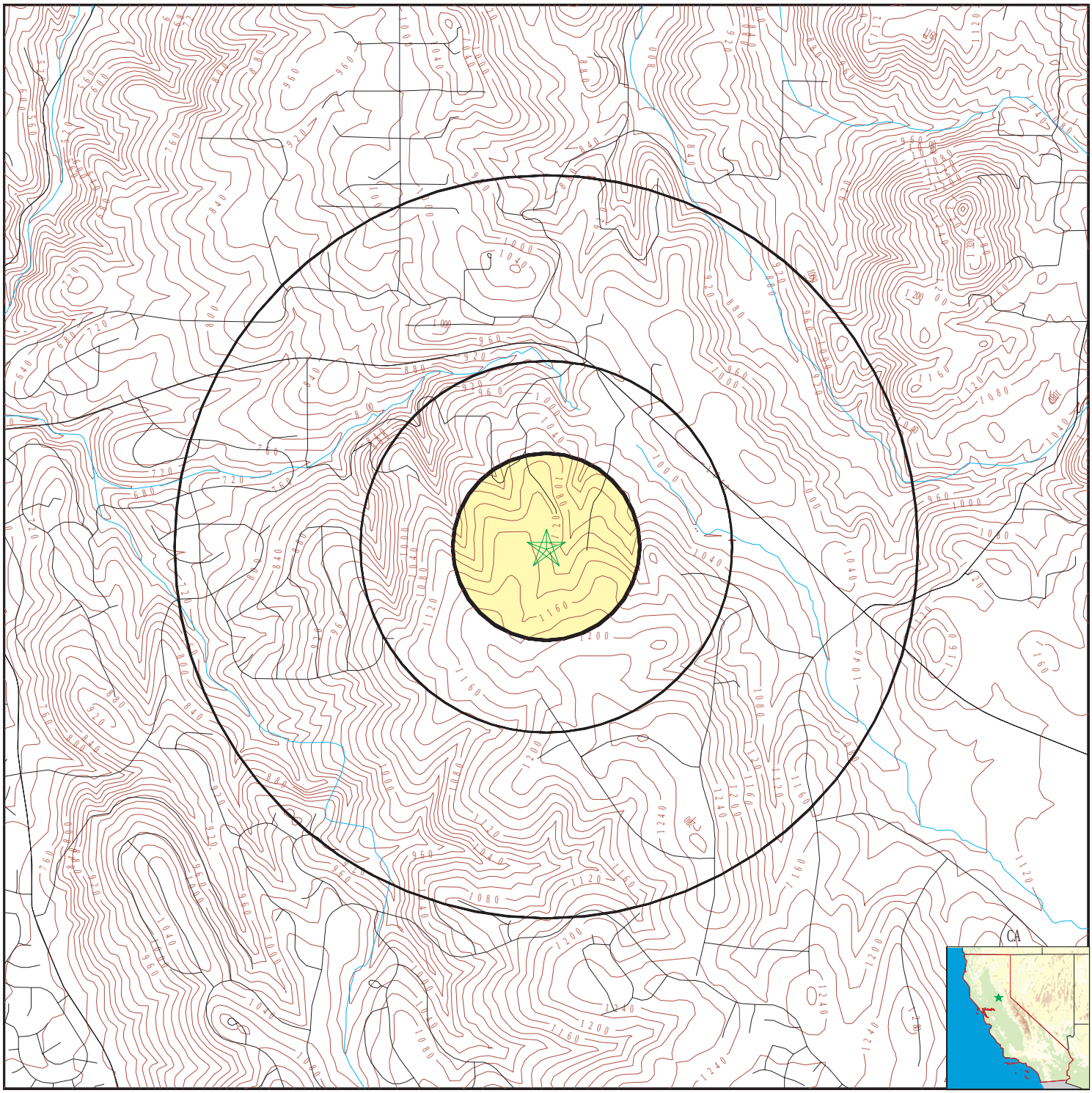
Note: PWS System location is not always the same as well location.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**STATE DATABASE WELL INFORMATION**

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| No Wells Found | | |

# PHYSICAL SETTING SOURCE MAP - 3002996.2s




- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

N

| | | | |
|---|---|---|---|
| SITE NAME: | Dixon Ranch | CLIENT: | Youngdahl Consulting Group |
| ADDRESS: | Green Valley Road<br>El Dorado Hills CA 95762 | CONTACT: | Laurie Israel |
| LAT/LONG: | 38.7059 / 121.0472 | INQUIRY #: | 3002996.2s |
| | | DATE: | March 01, 2011 3:53 pm |

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# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
# RADON

**AREA RADON INFORMATION**

State Database: CA Radon

Radon Test Results

| Zipcode | Num Tests | > 4 pCi/L |
|---|---|---|
| 95762 | 29 | 3 |

Federal EPA Radon Zone for EL DORADO County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

---

Federal Area Radon Information for EL DORADO COUNTY, CA

Number of sites tested: 27

| Area | Average Activity | % <4 pCi/L | % 4-20 pCi/L | % >20 pCi/L |
|---|---|---|---|---|
| Living Area - 1st Floor | 0.844 pCi/L | 100% | 0% | 0% |
| Living Area - 2nd Floor | Not Reported | Not Reported | Not Reported | Not Reported |
| Basement | 3.400 pCi/L | 50% | 50% | 0% |

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

## HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2009 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

## HYDROGEOLOGIC INFORMATION

AQUIFLOW$^{R}$ Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

## GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Health Services
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

## OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

**STREET AND ADDRESS INFORMATION**

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**Dixon Ranch**
Green Valley Road
El Dorado Hills, CA 95762

Inquiry Number: 3002996.5
March 04, 2011

# The EDR Aerial Photo Decade Package

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

# EDR Aerial Photo Decade Package

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

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***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.


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## Date EDR Searched Historical Sources:

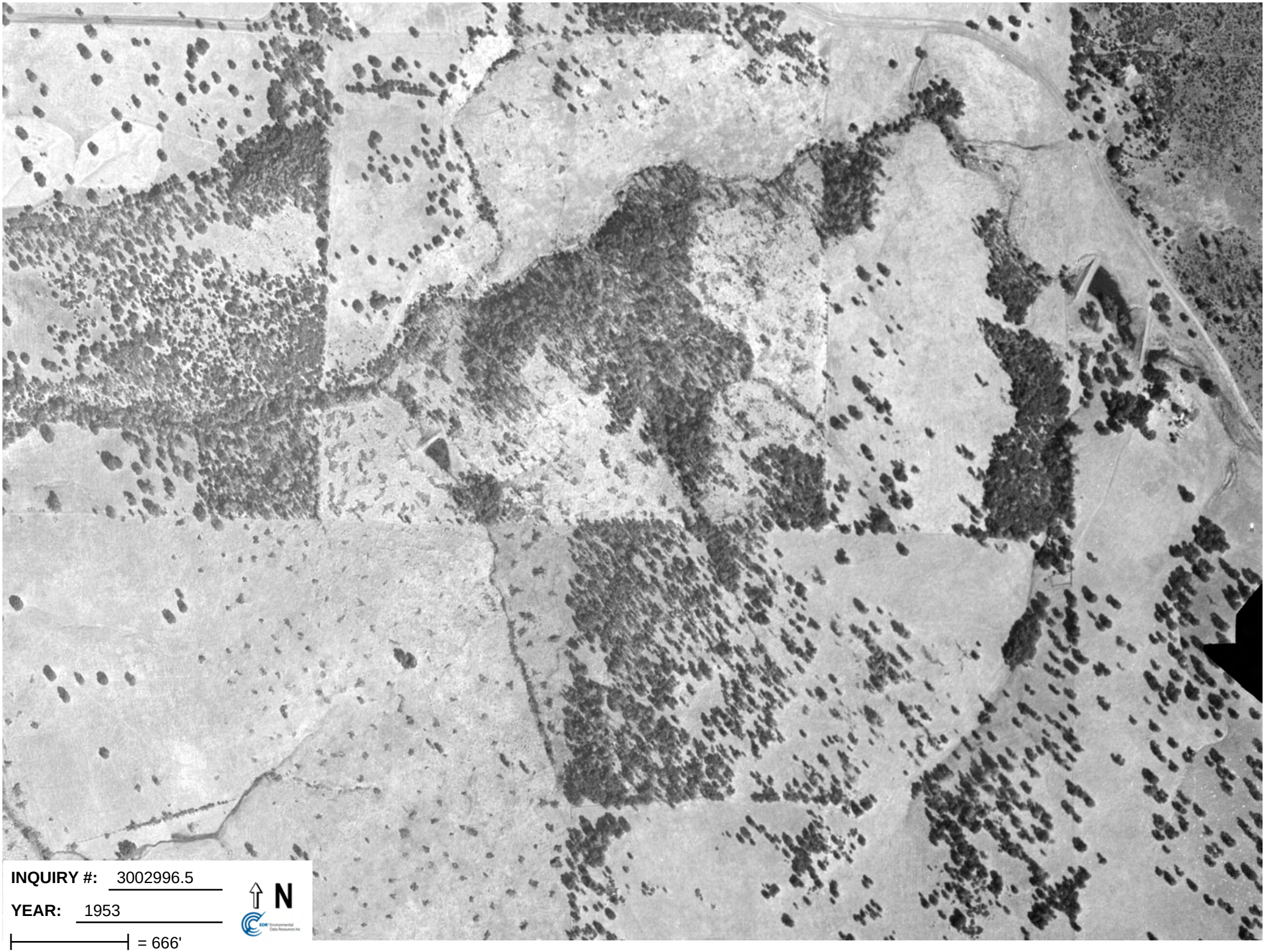
Aerial Photography March 04, 2011

## Target Property:

Green Valley Road

El Dorado Hills, CA 95762

| *Year* | *Scale* | *Details* | *Source* |
|---|---|---|---|
| 1953 | Aerial Photograph. Scale: 1"=666' | Flight Year: 1953<br>Best Copy Available from original source | Pacific Air |
| 1961 | Aerial Photograph. Scale: 1"=666' | Flight Year: 1961 | Cartwright |
| 1973 | Aerial Photograph. Scale: 1"=666' | Flight Year: 1973 | NASA |
| 1984 | Aerial Photograph. Scale: 1"=690' | Flight Year: 1984 | USGS |
| 1993 | Aerial Photograph. Scale: 1"=666' | Flight Year: 1993 | USGS |
| 1998 | Aerial Photograph. Scale: 1"=666' | Flight Year: 1998 | USGS |
| 2005 | Aerial Photograph. Scale: 1"=604' | Flight Year: 2005 | EDR |

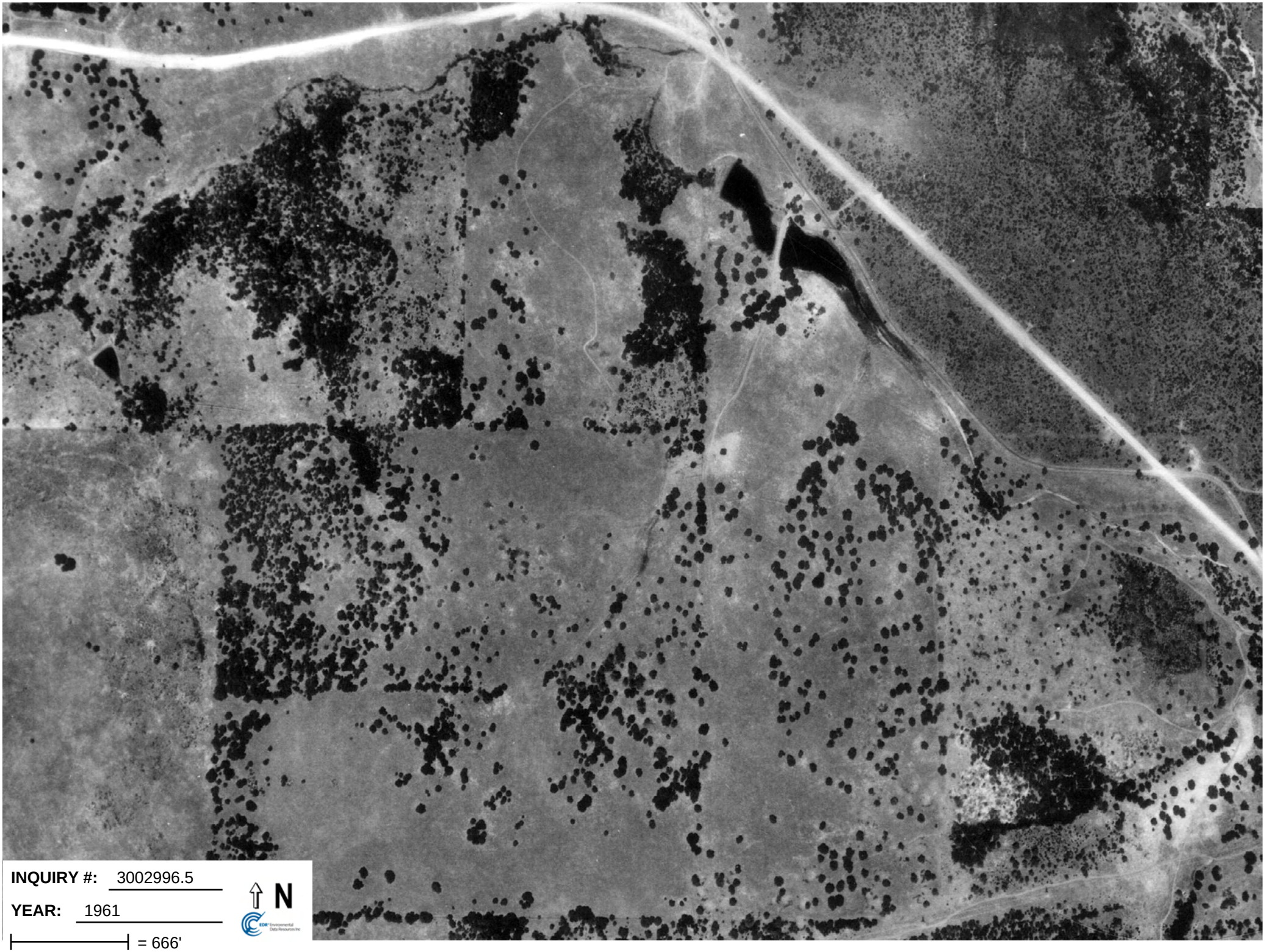


**INQUIRY #:** 3002996.5

**YEAR:** 1953

= 666'

N



**INQUIRY #:** 3002996.5

**YEAR:** 1961

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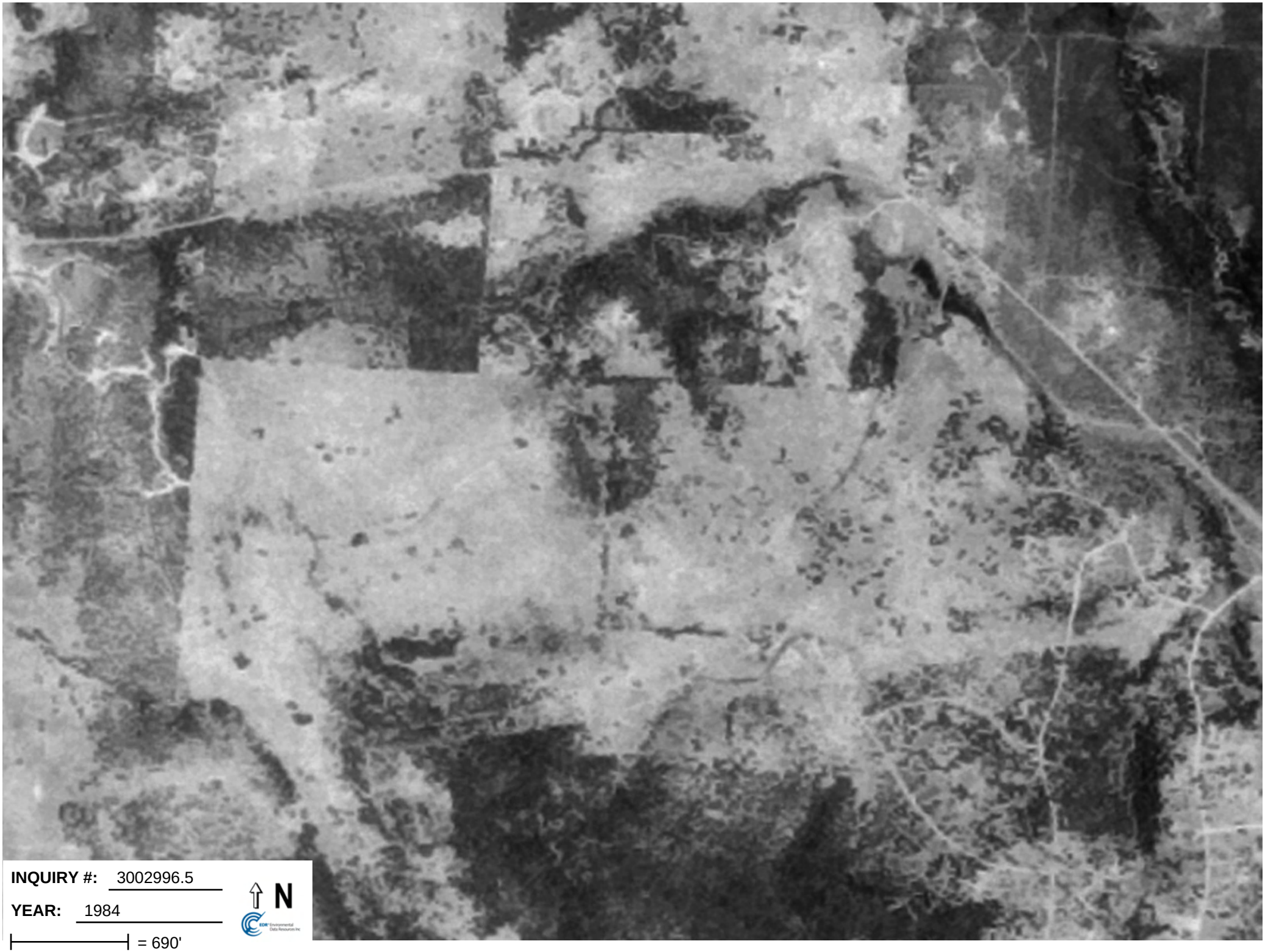
= 666'


INQUIRY #: 3002996.5
YEAR: 1973
= 666'
N



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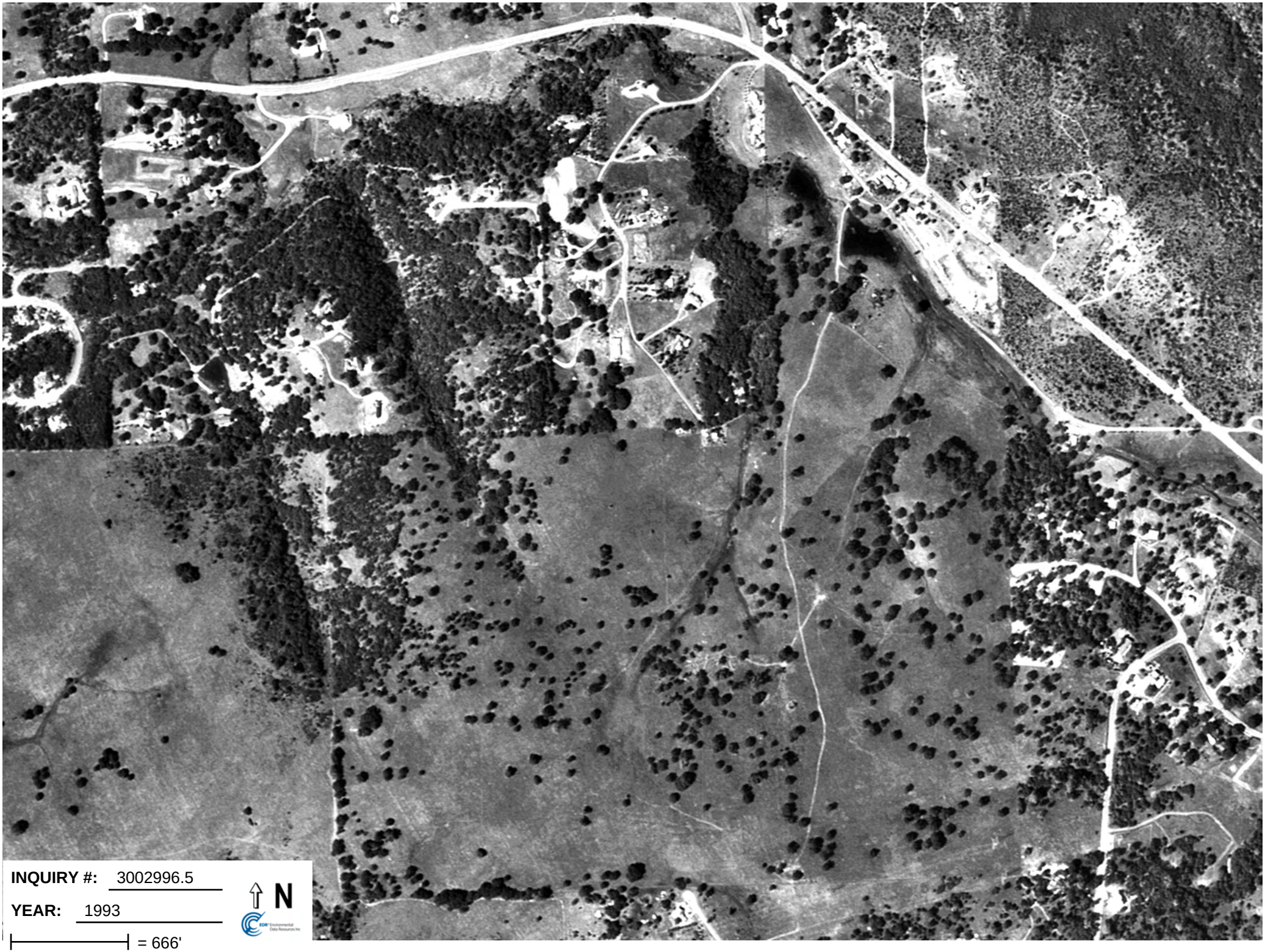
**YEAR:** 1984

= 690'

N

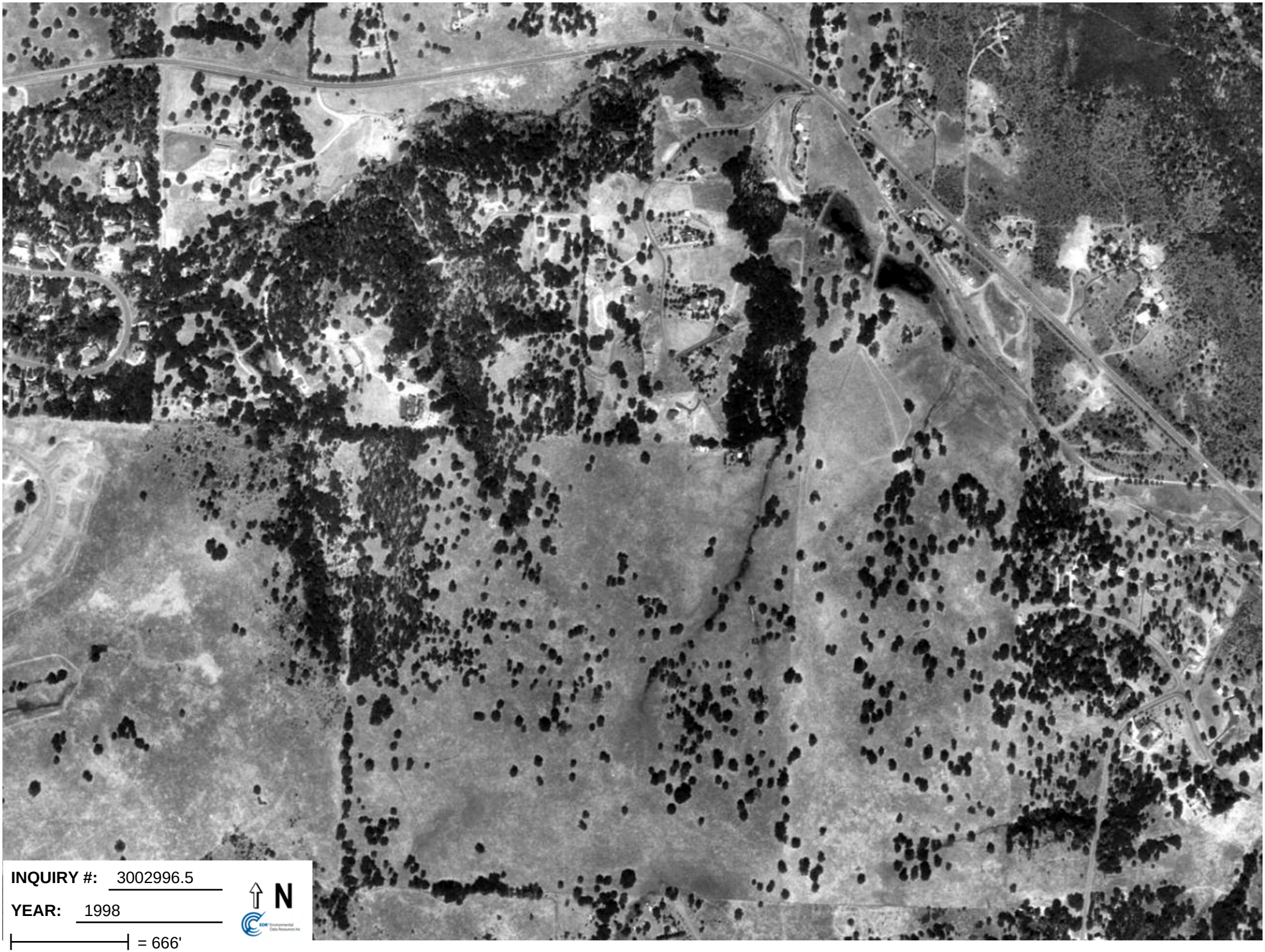


**INQUIRY #:** 3002996.5

**YEAR:** 1993

N

= 666'



**INQUIRY #:** 3002996.5

**YEAR:** 1998

= 666'

N


INQUIRY #: 3002996.5
YEAR: 2005
= 604'
N

**Dixon Ranch**
Green Valley Road
El Dorado Hills, CA 95762

Inquiry Number: 3002996.4
March 01, 2011

# EDR Historical Topographic Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

# EDR Historical Topographic Map Report

Environmental Data Resources, Inc.s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s.

***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.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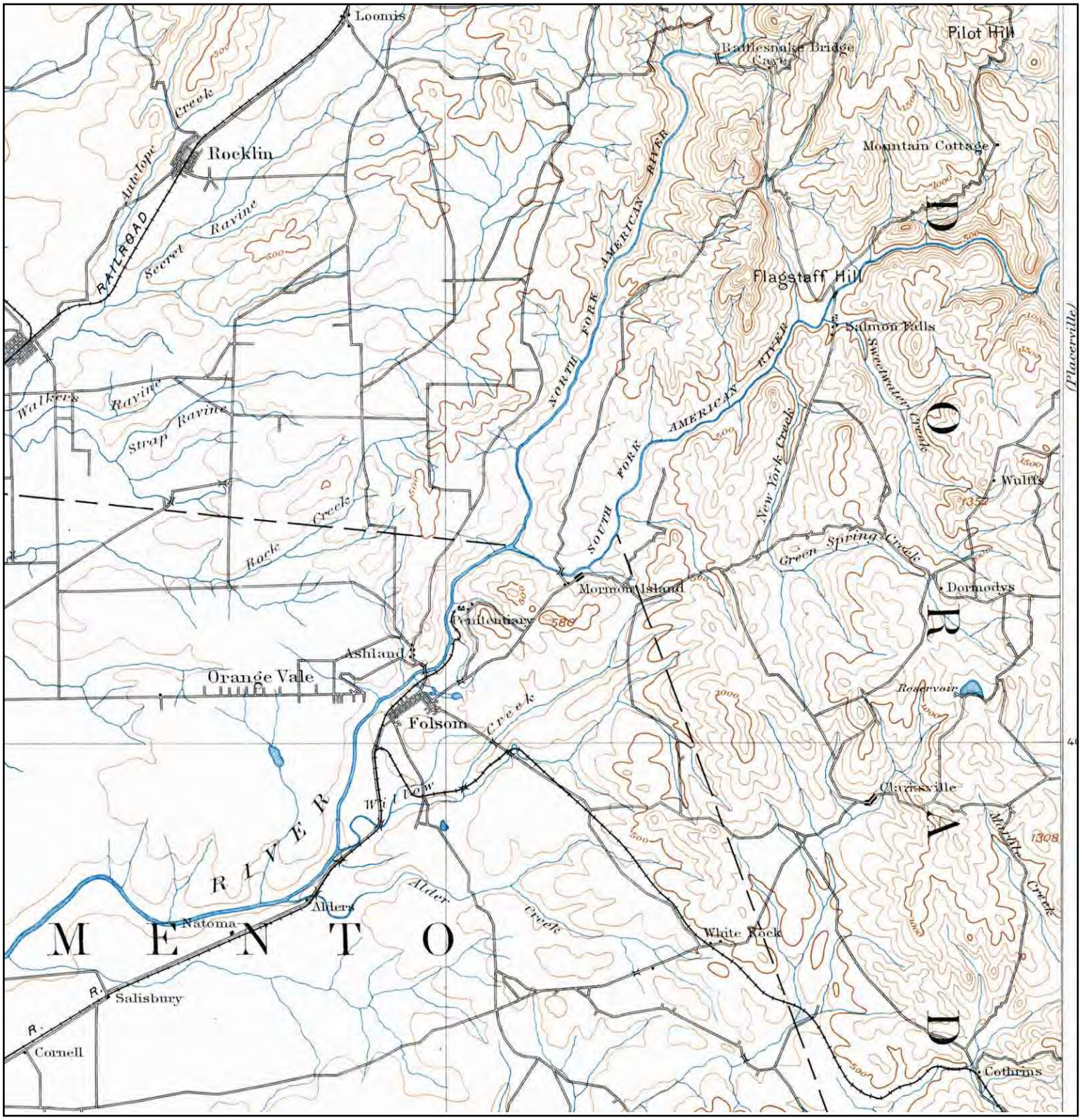
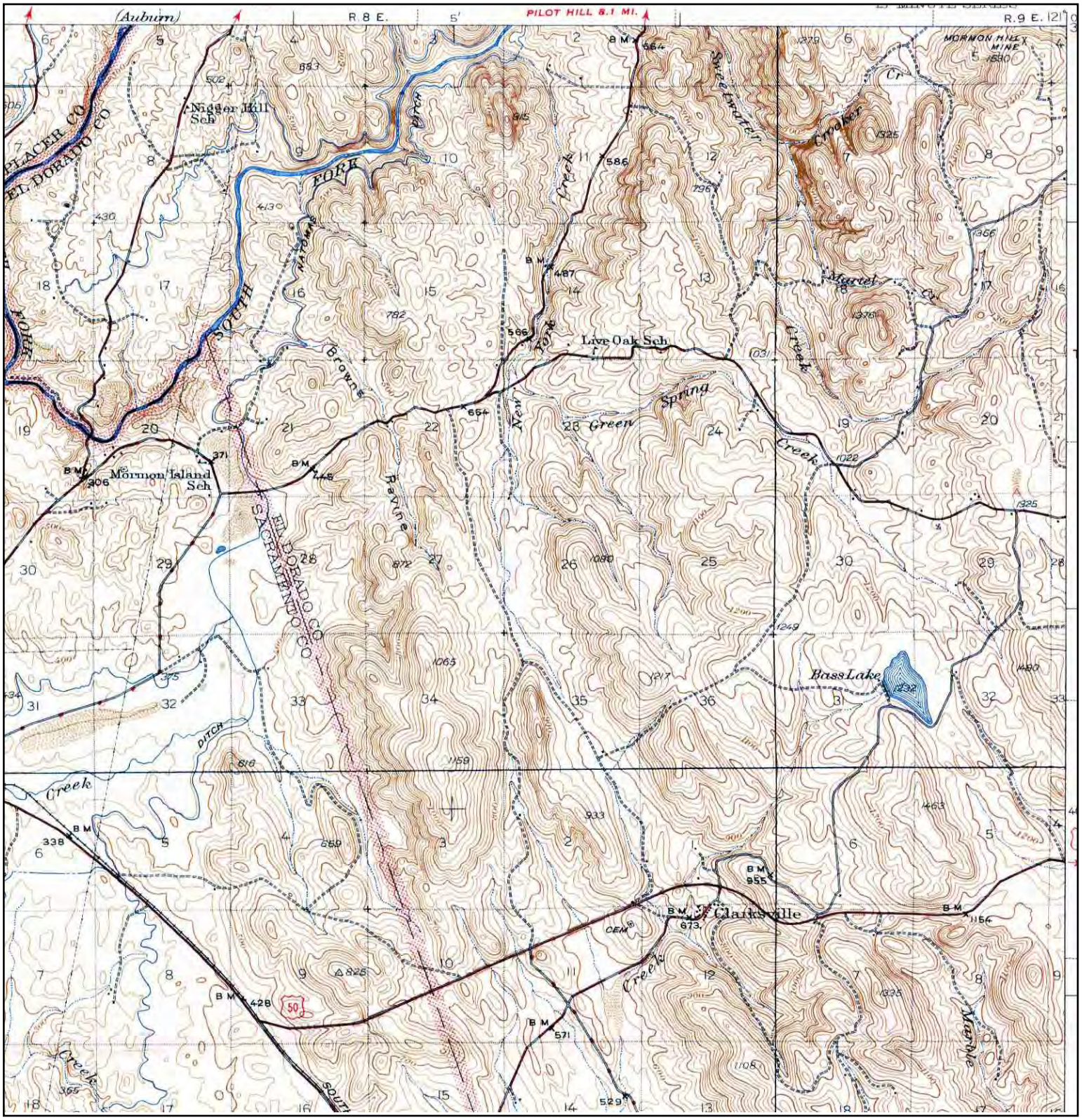
# Historical Topographic Map



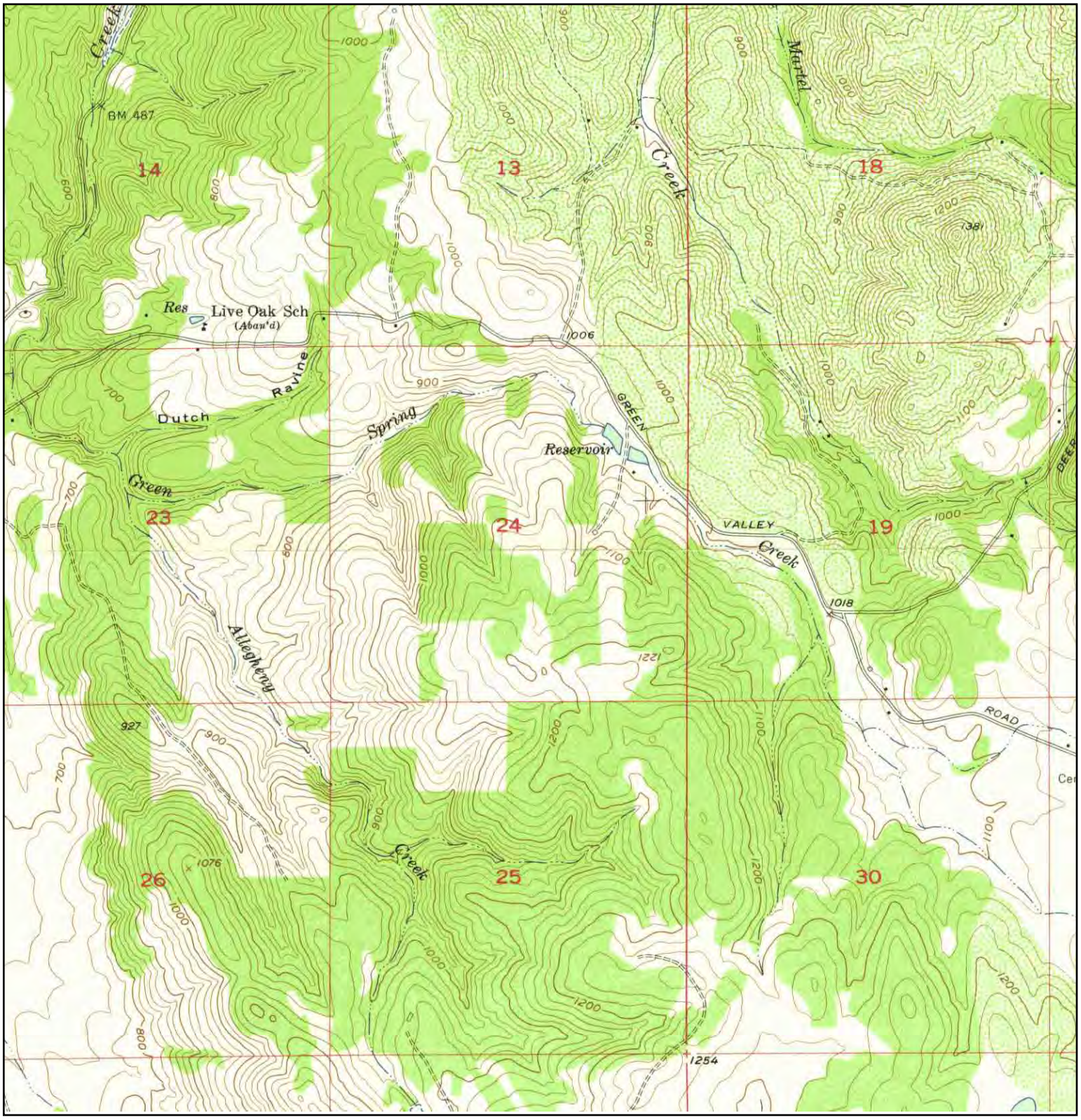

| | | | |
|---|---|---|---|
| N | TARGET QUAD<br>NAME: SACRAMENTO<br>MAP YEAR: 1893<br><br>SERIES: 30<br>SCALE: 1:125000 | SITE NAME: Dixon Ranch<br>ADDRESS: Green Valley Road<br>El Dorado Hills, CA 95762<br>LAT/LONG: 38.7059 / -121.0472 | CLIENT: Youngdahl Consulting Group<br>CONTACT: Laurie Israel<br>INQUIRY#: 3002996.4<br>RESEARCH DATE: 03/01/2011 |

# Historical Topographic Map



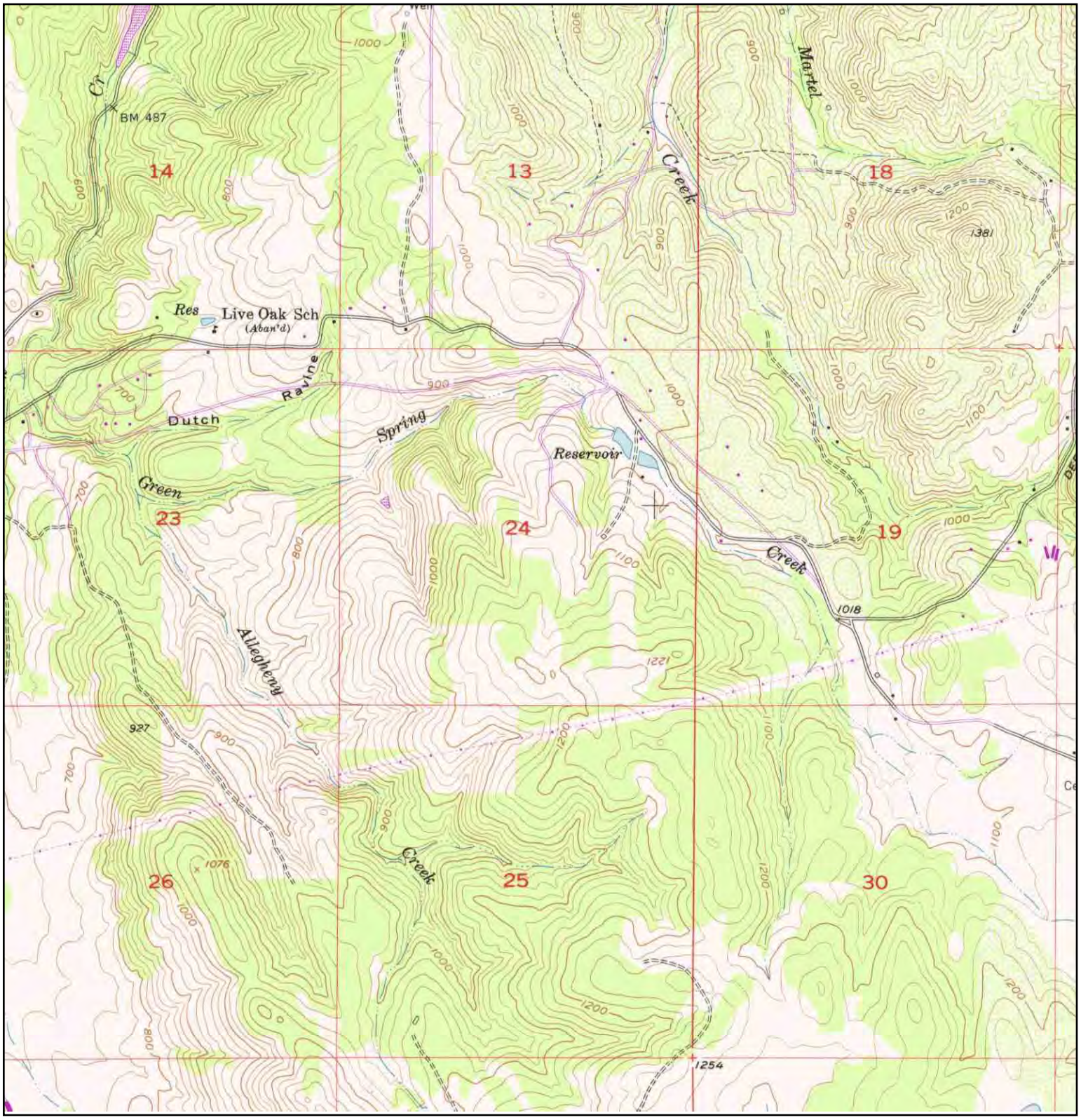

| | | | |
|---|---|---|---|
| N | TARGET QUAD<br>NAME: FOLSOM<br>MAP YEAR: 1944<br><br>SERIES: 15<br>SCALE: 1:62500 | SITE NAME: Dixon Ranch<br>ADDRESS: Green Valley Road<br>El Dorado Hills, CA 95762<br>LAT/LONG: 38.7059 / -121.0472 | CLIENT: Youngdahl Consulting Group<br>CONTACT: Laurie Israel<br>INQUIRY#: 3002996.4<br>RESEARCH DATE: 03/01/2011 |

# Historical Topographic Map




| | | | |
|---|---|---|---|
| N | TARGET QUAD<br>NAME: CLARKSVILLE<br>MAP YEAR: 1953<br><br>SERIES: 7.5<br>SCALE: 1:24000 | SITE NAME: Dixon Ranch<br>ADDRESS: Green Valley Road<br>El Dorado Hills, CA 95762<br>LAT/LONG: 38.7059 / -121.0472 | CLIENT: Youngdahl Consulting Group<br>CONTACT: Laurie Israel<br>INQUIRY#: 3002996.4<br>RESEARCH DATE: 03/01/2011 |

# Historical Topographic Map




| N | | | |
|---|---|---|---|
| | TARGET QUAD<br>NAME: CLARKSVILLE<br>MAP YEAR: 1973<br>PHOTOREVISED:1953<br>SERIES: 7.5<br>SCALE: 1:24000 | SITE NAME: Dixon Ranch<br>ADDRESS: Green Valley Road<br>El Dorado Hills, CA 95762<br>LAT/LONG: 38.7059 / -121.0472 | CLIENT: Youngdahl Consulting Group<br>CONTACT: Laurie Israel<br>INQUIRY#: 3002996.4<br>RESEARCH DATE: 03/01/2011 |

**Dixon Ranch**
Green Valley Road
El Dorado Hills, CA 95762

Inquiry Number: 3002996.6
March 04, 2011

# The EDR-City Directory Abstract

Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

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## SECTION

**Executive Summary**

**Findings**

***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.

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# EXECUTIVE SUMMARY

## DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

## RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

| Year | Source | TP | Adjoining | Text Abstract | Source Image |
|---|---|---|---|---|---|
| 2008 | Haines Criss-Cross Directory | - | X | X | - |
| 1996 | Haines Criss-Cross Directory | - | X | X | - |
| 1989 | Haines Criss-Cross Directory | - | - | - | - |
| 1982 | Haines Criss-Cross Directory | - | - | - | - |
| 1976 | Haines Criss-Cross Directory | - | - | - | - |

# EXECUTIVE SUMMARY

## SELECTED ADDRESSES

The following addresses were selected by the client, for EDR to research. An "X" indicates where information was identified.

| *Address* | *Type* | *Findings* |
|---|---|---|
| 1768 Green Valley Road | Client Entered | X |
| 1838 Green Valley Road | Client Entered | X |
| 1840 Green Valley Road | Client Entered | |
| 3200 Verde Valle Road | Client Entered | X |

# FINDINGS

## TARGET PROPERTY INFORMATION

### ADDRESS

Green Valley Road
El Dorado Hills, CA 95762

### FINDINGS DETAIL

Target Property research detail.

No Addresses Found

# FINDINGS

## ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

### Green Valley Road

**1768 Green Valley Road**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 2008 | Residential | Haines Criss-Cross Directory |
| 1996 | Residential | Haines Criss-Cross Directory |

**1838 Green Valley Road**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 1996 | No Return | Haines Criss-Cross Directory |

**1851 Green Valley Road**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 2008 | Residential | Haines Criss-Cross Directory |
| 1996 | Residential | Haines Criss-Cross Directory |

**1870 Green Valley Road**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 2008 | Residential | Haines Criss-Cross Directory |
| 1996 | Residential | Haines Criss-Cross Directory |

### Verde Valle Road

**3200 Verde Valle Road**

| *Year* | *Uses* | *Source* |
|---|---|---|
| 2008 | No Return | Haines Criss-Cross Directory |

# FINDINGS

## STREET NOT IDENTIFIED IN RESEARCH SOURCE

The following Streets were researched for this report, and the Streets were not identified in the research source.

| Street Researched | Street Not Identified in Research Source |
|---|---|
| Verde Valle Road | 1989, 1982, 1976 |

## TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

| Address Researched | Address Not Identified in Research Source |
|---|---|
| Green Valley Road | 2008, 1996, 1989, 1982, 1976 |

## ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

| Address Researched | Address Not Identified in Research Source |
|---|---|
| 1768 Green Valley Road | 1989, 1982, 1976 |
| 1838 Green Valley Road | 2008, 1989, 1982, 1976 |
| 1840 Green Valley Road | 2008, 1996, 1989, 1982, 1976 |
| 1851 Green Valley Road | 1989, 1982, 1976 |
| 1870 Green Valley Road | 1989, 1982, 1976 |
| 3200 Verde Valle Road | 1996 |

**Dixon Ranch**
Green Valley Road
El Dorado Hills, CA 95762

Inquiry Number: 3002996.3
March 01, 2011

# Certified Sanborn® Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

# Certified Sanborn® Map Report

3/01/11

**Site Name:**
Dixon Ranch
Green Valley Road
El Dorado Hills, CA 95762

**Client Name:**
Youngdahl Consulting Group
1234 Glenhaven Court
El Dorado Hills, CA 95762

EDR Inquiry # 3002996.3

Contact: Laurie Israel

EDR® Environmental Data Resources Inc

The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by Youngdahl Consulting Group were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

## *Certified Sanborn Results:*

**Site Name:** Dixon Ranch
**Address:** Green Valley Road
**City, State, Zip:** El Dorado Hills, CA 95762
**Cross Street:**
**P.O. #** NA
**Project:** E11047.001
**Certification #** 7054-4FA4-A822

Sanborn® Library search results
Certification # 7054-4FA4-A822

### UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✓ Library of Congress
- ✓ University Publications of America
- ✓ EDR Private Collection

*The Sanborn Library LLC Since 1866™*

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# EL DORADO HILLS FIRE DEPARTMENT

*"Serving the Communities of El Dorado Hills, Rescue and Latrobe"*

April 30, 2024

Ms. Hallie Douglas
1300 Clay Street, Suite 100
Oakland, CA 94612

Subject: **Public Records Request for 3200 Verde Valle Lane, 1856 Green Valley Rd., APN 126-020-001, 126-020-002, 126-020-003, 126-020-004, and 126-150-023, El Dorado Hills, CA 95762**

Dear Ms Douglas:

I have reviewed your request made on April 22, 2024, for all related records this agency holds regarding the property identified within the above subject line. This request has been made pursuant to the provisions found in California Government Code Section 6250 ET SEQ (California Public Records Act).

The following information identifies those records this agency currently maintains concerning this property:

**Above-Ground / Underground Storage Tanks**

NO RECORDS ON FILE

**Chemical or Petroleum Spills**

NO RECORDS ON FILE

**Fires**

NO RECORDS ON FILE

**Chemical Reporting**

NO RECORDS ON FILE

**Inspections and Violations**

SEE ATTACHED RECORDS

**Compliance Investigations**

NO RECORDS ON FILE

Please note that the County of El Dorado, Department of Environmental Management, Hazardous Waste Division is designated as the Certified Unified Program Agency (CUPA) for all regulatory oversight, permits, inspections and enforcement activities pertaining to hazardous materials. We recommend that you contact that Department for assistance in determining if additional public records exist for this site related to hazardous material and environmental oversight. You may find additional information regarding the CUPA program in this County at the following website: https://www.edcgov.us/Government/emd/ HazardousMaterials/Pages/cupa_program.aspx.

If you wish to inspect or obtain records this agency maintains please do not hesitate to contact my office at (916) 933-6623, for further assistance. Records may be inspected at the El Dorado Hills Fire Department, Administrative Office, located at 1050 Wilson Boulevard, El Dorado Hills CA during our regular business hours. Copies of records may be obtained for the direct cost of duplication in accordance with the El Dorado Hills Fire Department Fee Schedule. The right to inspect and copy records does not extend to records that are exempt from disclosure by the California Public Records Act.

Sincerely,

Chrishana Fields
Fire Marshal, El Dorado Hills Fire Department

# EL DORADO HILLS FIRE - Inspection Report

## Inspection Details

**Inspection Number:** 2023080905528
**Inspection Date:** 08/09/2023
**Inspection Type:** INSPECTION - Smoke and CO Alarm
**Inspected By:** Jennings, Miles
**Passed (Yes / No):** No
**Violation Count:** 2

## Location Information

**Name:** 3200 Verde Valle Lane
**APN:** 126020001
**Street Number:** 3200
**City:** El Dorado Hills
**Street Name:** Verde Valle
**Zip:** 95762

## Primary Contact

**First Name**
**Last Name**
**Email**
**Work Phone**
**Cell Phone**

## Violations

### Violations

| Code Set | Violation Code | Comments | Days to Correct | Repaired Date |
|---|---|---|---|---|
| CFC 2019 | 915.1 | Needs to fix or replace the smoke alarm up the few steps just outside the kitchen. Needs to add 2 CO alarms upstairs, one outside the two side by side bedrooms and one outside the master. Needs to retest the alarms inside the two bedrooms. | 29 | |
| CFC 2019 | 915.1 | Needs to fix or replace the smoke alarm up the few steps just outside the kitchen. Needs to add 2 CO alarms upstairs, one outside the two side by side bedrooms and one outside the master. Needs to retest the alarms inside the two bedrooms. | 29 | |

## Signatures

### Signatures

## Smoke and CO - FINAL

### Smoke & CO

| Question | Answer | Notes |
|---|---|---|
| Are all smoke and co alarms installed per the year the home/addition was built? | Yes | |
| Is a smoke alarm installed and operational in each bedroom? | Yes | |
| Is a carbon monoxide alarm installed and operational in each hallway near bedrooms? (required for fuel-fired appliances and/or attached garage) | No | Needs to fix or replace the smoke alarm up the few steps just outside the kitchen. Needs to add 2 CO alarms upstairs, one outside the two side by side bedrooms and one outside the master. Needs to retest the alarms inside the two bedrooms. |
| Is there a minimum of one smoke and co alarm installed and operational on each floor level? (within range of a stairwell and/or bedrooms) | No | Needs to fix or replace the smoke alarm up the few steps just outside the kitchen. Needs to add 2 CO alarms upstairs, one outside the two side by side bedrooms and one outside the master. Needs to retest the alarms inside the two bedrooms. |

11-18-77

Void ~~B-22392~~
Convert Ag. Barn to Storage ~~B-22728~~ 405
Add Elec. to Storage B-~~23205~~

DATE

NUMBER

ADDRESS end of Green Springs Rd.

~~LOCATION~~ Dixon, Robert

OWNER /

BUILDER Schroeder, Raymond

TYPE OF STRUCTURE elect. for existing barn

REMARKS follow-up in 90 days to see if barn is occupied per RM - 11-18-77 2-18-78

INSPECTIONS:

Temp. power: 1-10-78 JB

P.G.E. Notified: 1-11-78

Plot Plans: enc.

Septic final:

Health Dept. I.D. finaled:

Permit released: 11-18-77

Final all: 4/29/81 [illegible] 1-10-78 TB

#22728 released on 1st insp.

Per # 22728 issued to convert Exempt Ag Barn to storage
add elec (200 service & [illegible])

6 mo. follow-up 6-78 (#22728)

Posted For Violation 6-15-78 Skarda

~~10 day follow up - on cal 6-28-78~~

90 day follow up - on cal 9-27-78

3-20-81 Apparently occupied, drops at windows & nobody home

# EL DORADO COUNTY BUILDING DEPARTMENT

## CONSTRUCTION PERMIT

No. ~~22092~~ Void

☐ Bldg ☐ Plumb ☒ Elec ☐ Mech ☐ Gas ☐ Sewage ☐ Mobile Home Site

Date 11-18-77
Owner Robert Dixon
Address 1169 Jordan Dr. #69
City & State Roseville, CA
Zip ____ Telephone ____
Contractor Raymond Schroeder
Address 3603 Ridgeview Dr.
City El Dorado Hills, CA
Zip 95610 Telephone 933-2570
Contractor's License No. 324595 Class B-1
Workmen's Comp No. yes- on file
Lending Agency ____
Branch ____

Assessor's Parcel No. 67-050-17
Section 24 Township 10 Range ____
Parcel Map No. ____ County Rd ____
No. of Bedrooms ____ Perc Test ____
Water Source ____ Supplier ____
Public Sewer ____

PLANNING DEPARTMENT USE
Lot Size 140.50 ac Zone AE
Min. Setbacks FR 20' RS 10' LS 10' R 10'
House No. ____
School Dist. Rescue/Ponderosa
Super. Dist. 1 C.T. 39.03
Variance or Spec Use No. ____ Date ____

DRIVING DIRECTIONS Green Valley Rd. west to Green Springs Rd. Left on Green Springs Rd to end of ~~xxxx~~ road.
Name fixes gate @ east - yellow dairy barn.

Permission is hereby granted to build, occupy and use as specified, the building or structure listed below.

| DESCRIPTION | GROUP & DIV | TYPE RATING | SQUARE FEET | COST/SQ FT | VALUATION |
|---|---|---|---|---|---|
| Electric for existing barn: for lights and furniture refinishing work. | | | | | $ |

Type of Heating 100 or 200 amp serv. Data Code ____ Total Valuation $ ____

Remarks and Conditions

BARN NOT FOR HABITATION.

Fees

| | |
|---|---|
| CONSTRUCTION | $ 5.00 |
| M.H. SITE | |
| SEWAGE | |
| ENCROACHMENT | |
| ISSUANCE | 5.00 |
| PENALTY | |
| TOTAL | $ 10.00 |

NOTE: PERMIT EXPIRES IF WORK IS NOT BEGUN WITHIN 6 MONTHS OR IS SUSPENDED MORE THAN 6 MONTHS.

RECEIPT NO ____

This Work Permit Authorized and permit issued by Rowland Haddox Date 11-18-77 Clerk D. Dixon

| STRUCTURAL | DATE | INSP | ELEC | DATE | INSP | PLUMB | DATE | INSP | MECH | DATE | INSP |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Setbacks Found | | | U-Ground | | | U-Ground Waste | | | Heat Duct | | |
| Slab | | | Rough | | | Rough | | | Cold Air Duct | | |
| Frame | | | Main Panel | | | Vents | | | Heater Furnace | | |
| Lath | | | Well Pump | | | Sewer | | | Flues | | |
| Sheetrock | | | Sub Panel | | | Water Supply | | | Ex. Fan | | |
| Stucco | | | Base Heat | | | Int. P.V. Pipe | | | A.C. Unit | | |
| Roof Deck | | | Fixtures | | | Tub Shower | | | Hood | | |
| Roof Cover | | | Pedestal | | | W.H. | | | Vents | | |
| Stair-Rail | | | | | | Gas Pipe | | | | | |
| U-Floor Vent | | | | | | | | | | | |
| Attic Vent | | | | | | | | | | | |

CORRECTION NOTICE POSTED

| Mech. | Date | Insp. | M/H | Date | Insp. |
|---|---|---|---|---|---|
| Deck-rail | | | Site | | |
| Fireplace Throat | | | Supp. Struct | | |
| Fireplace Roof | | | Ramada | | |
| Swim. Pool | | | | | |
| Septic Tank | | | | | |
| Leach Line-Pit | | | | | |
| Rock & Pipe | | | | | |
| D-Box | | | | | |

| Date | Insp | Approved | Insp. | Stop Work | Insp. |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

P.P. Tag # _____ T.P. Tag # _____

Gas Tag # _____ Test # _____ CO

Final Meter Set Tag # _____

FINAL INSPECTION

INSP INSP INSP INSP

Bldg _____ Mech _____ Fireplace _____ Septic Sys _____

Elec. _____ M/H Site _____ Swim. Pool _____ E.R.C. _____

Plumb. _____ Deck-Rail _____ Grading _____ Road Encr. _____

CERTIFICATE OF OCCUPANCY ISSUED _____ DATE _____ BY INSP _____

COMMENTS: _____

Sh. follow up 2-18-77 no check, Drive is satisfactory 4-21-77 See CV - Base is level Guard rail, wooden up & Down Lower side on some fill, basement pattern & Insulation 3' less Slabbase into floor for tanks ? no other plumbing in #3

Deed Rest given

| Routed To | Date |
|---|---|
| Owner | |
| Contr | |
| Health Dept | |
| Road Dept | |
| Plans Returned | |

# EL DORADO COUNTY BUILDING DEPARTMENT
## APPLICATION FOR CONSTRUCTION PERMIT

Plan Check Number 22392
Permit Number

Type 1 Hole

✓ Bldg Plumb ✓ Elec Mech Gas Sewage Mobile Home Site

### APPLICANT TO COMPLETE

Date 11-17-77 (1) Assessor's Parcel No. 67-050-17

Owner Robert Dixon Section 24 Township 10 Range 5

Address Parcel Map No. County Road

City & State Auburn No. of Bedrooms / Perc. Test /

Zip Telephone Water Source / Supplier /

Contractor Raymond L. Schroeder Public Sewer

Address 5000 Ridgeview Dr, E

Zip 95630 Telephone 933-5570

Contractor's License No. 324599 Class B-1

Workmen's Comp. No. yes on file

Lending Agency

Branch

Branch

**PLANNING DEPARTMENT USE**

(2) Lot Size 40.50 A Zone [illegible]

Min Setbacks FR 60 RS 10 LS 10 Rear 15

House No.

School Dist. [illegible]

Super. Dist. [illegible]

Variance or Special Use No. Date

DRIVING DIRECTIONS: GREEN VALLEY RD WEST TO GREEN SPRINGS RD Lt ON GREEN SPRINGS TO END OF RD.

### DESCRIPTION OF WORK

Elect. for existing Barn.

Building Use Data Code Mobile Home Make

for lights, refinishing work

Electric Amps 200 Size State Mfg. Year

Plumbing No Serial No.

Mechanical License No.

Sewage For Period of

### OWNER/CONTRACTOR/AGENT-SIGN ON REVERSE SIDE OF APPLICATION

FOR OFFICE USE ONLY

| APPROVALS | APP BY | DATE | OCC | TYPE | SQ FT | COST | VALUATION |
|---|---|---|---|---|---|---|---|
| HEALTH | | | | | | Out. | 400.00 |
| PLANNING | [illegible] | [illegible] | | | | | |
| FIRE DIST | | | | | | | |
| | | | Total Valuation $ | | | | |

Fees
Construction 5.00
M. H. Site
Sewage
Engineering
Insurance 5
Penalty

Not for Habitation

Total $ 10.00

Rec By [illegible] Approved By [illegible] Date Rec No. 30242

Building – White Health – Yellow Planning – Pink Road Dept – Goldenrod

# CONTRACTORS–OWNER/BUILDER

I hereby certify that I have read this application and that the information is correct. I agree to comply with all County Ordinances and State Laws relating to building construction.

**1. LICENSED CONTRACTORS DECLARATION** — I certify that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

Date 11-17-77 Contractor Raymond F. Alexander

License Class & No. B-1 — 324599

**2. OWNER—BUILDER DECLARATION** — I hereby affirm that I am exempt from the Contractors' License Law, Business and Professions Code, (Section 7031.5) by one of the following:

(a) I, as owner of the property, will do the work myself without hiring any employees, and the building or structure is not intended or offered for sale. (Proof of sale or offering for sale of the structure by the owner-builder within one year is presumptive evidence that such structure was undertaken for the purpose of sale). Complete Section #4 below. (Section 7031.5)

(b) I, as owner, am contracting with local contractors to construct the project. (Section 7044)

(c) I, as owner of the property, will employ workers with wages as their sole compensation. Complete Section #3 below.

(d) I am exempt under Section _____ Reason _____

Date _____ Owner _____

**3. WORKMEN'S COMPENSATION INSURANCE** — I hereby affirm that I have a certificate of Workmen's Compensation Insurance, and or a certified copy thereof.

Policy No. AB 273-7 Company Employers Equity Ins. Co. Exp. Date 1-1-78

___ Certified copy is hereby furnished

X Certified copy is on file with the Building Department

Date 11-17-77 Applicant Raymond F. Alexander

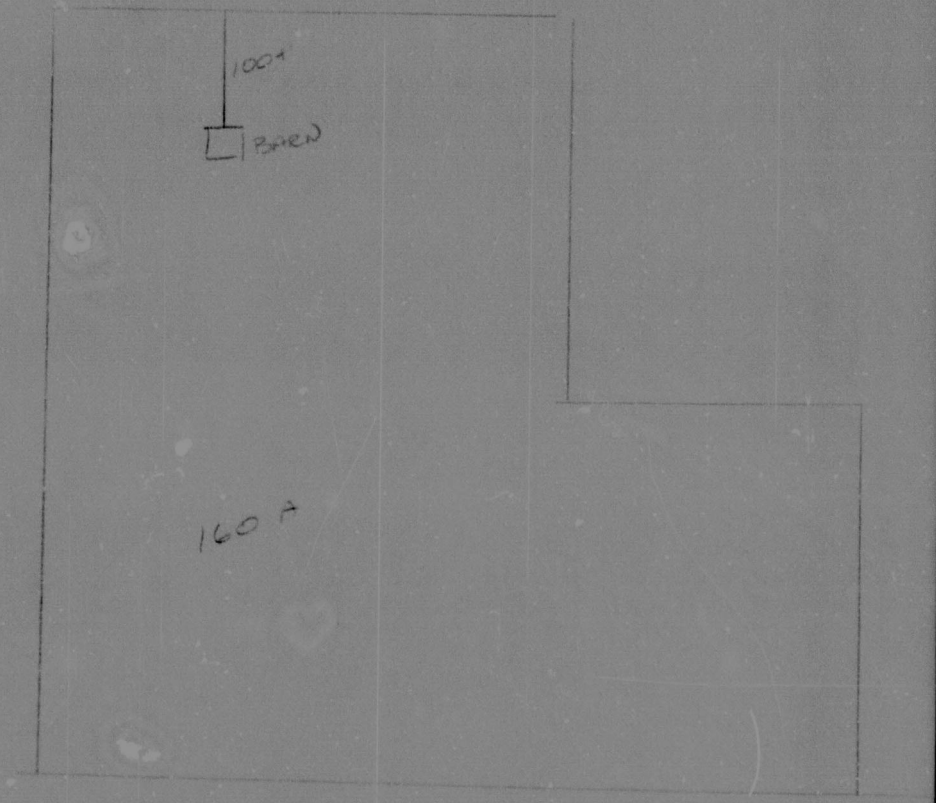
If you do not intend to employ any person so as to become subject to the Workmen's Compensation Law, complete the following:

**4. CERTIFICATE OF EXEMPTION FROM WORKMEN'S COMPENSATION INSURANCE** — I certify that in the performance of the work for which this permit is issued I shall not employ any person in any manner so as to become subject to the Workmen's Compensation Laws of California.

Date _____ Applicant _____

NOTE: If after making this Certificate you should become subject to Workmen's Compensation provisions of the Labor Code you must forthwith comply or the permit shall be deemed revoked.

67 05-17



S24, T10N, R8E

Green Springs Road

ROBERT DIXON
1169 JORDIAN DR. #65
ROSEVILLE, CA 95678

Temporary fence line

50'

67-050-17

67-050-18
20A

Agri Exempt
barn to be
converted to Storage
w/ elec, future plank

— 50'

26'

24'

Dec 29th 77
Robert Dixon
Joyce Dixon

Proposed fence line

# EL DORADO COUNTY BUILDING DEPARTMENT

## CONSTRUCTION PERMIT

№ 22728

3200 Valley Verde

New 067/054

☒ Bldg ☐ Plumb ☒ Elec ☐ Mech ☐ Gas ☐ Sewage ☐ Mobile Home Site

Date 12-29-77
Owner Robert Dixon
Address 1169 Jordian Dr. #69
City & State Roseville, CA
Zip 95678 Telephone 782-4846
Contractor Owner
Address
City
Zip Telephone
Contractor's License No. Class
Workmen's Comp No. none
Lending Agency none
Branch

Assessor's Parcel No. 67-050-18
Section 24 Township 10 Range 8
Parcel Map No. County Rd Private
No. of Bedrooms Perc Test
Water Source Supplier
Public Sewer

**PLANNING DEPARTMENT USE**

Lot Size 20 acres Zone AE
Min. Setbacks: FR 50 RS 50 LS 50 R 50
House No.
School Dist. Rescue/Ponderosa
Super. Dist. 1 C.T. 307
Variance or Spec Use No. Date / /

DRIVING DIRECTIONS Green Valley Road west to Green Springs Road, left on Green Springs Rd. to end of road - new steel gate XXX at end of gravel road.

Permission is hereby granted to build, occupy and use as specified, the building or structure listed below:

| DESCRIPTION | GROUP & DIV. | TYPE RATING | SQUARE FEET | COST/SQ.FT. | VALUATION |
|---|---|---|---|---|---|
| Convert Agricultural-Exempt Barn to Storage. Add Electrical (2 lights & 2 Outlets). (Rough Ground Plumbing to be Capped). Will be Exposed for Inspector When Septic is Installed. | | | | | $ |
| | 24' x 26' Lower Level with Loft Area. | | | | |
| Conversion | J | VN | 884 | 5.30 | 4,685.20 |

Type of Heating Data Code Total Valuation $ 4,685.20

Remarks and Conditions:
Permit #22392 - VOID.

| | Fees |
|---|---|
| CONSTRUCTION | $ 30.00 |
| M.H. SITE | |
| SEWAGE | |
| ENCROACHMENT | |
| ISSUANCE | 5.00 |
| PENALTY | |
| TOTAL | $ 35.00 |

NOTE: PERMIT EXPIRES IF WORK IS NOT BEGUN WITHIN 6 MONTHS OR IS SUSPENDED MORE THAN 6 MONTHS.

RECEIPT NO. 30814

This Work Permit Authorized and permit issued by W. Rice Date 12-29-77 Clerk lv

EL DORADO COUNTY BUILDING DEPARTMENT

# CONSTRUCTION PERMIT

№ 23205

☑ Bldg ☐ Plumb ☒ Elec ☐ Mech ☐ Gas ☐ Sewage ☐ Mobile Home Site

Date 3-1-78
Owner Robert Dixon
Address 1169 Jordian Dr. #69
City & State Roseville, CA
Zip 95678 Telephone 782-4846
Contractor Owner
Address
City
Zip Telephone
Contractor's License No. Class
Workmen's Comp No.
Lending Agency
Branch

Assessor's Parcel No. 67-050-18
Section 24 Township 10 Range 8
Parcel Map No. County Rd
No. of Bedrooms Perc Test
Water Source Supplier
Public Sewer

PLANNING DEPARTMENT USE
Lot Size 20 acres Zone AE
Min. Setbacks: FR RS LS R
House No.
School Dist. Rescue/Ponderosa
Super. Dist. 1 C.T. 307
Variance or Spec Use No. Date / /

DRIVING DIRECTIONS Green Valley Rd. west to Green Springs Rd., left on Green Spri Rd. to end of road - new steel gate at end of gravel road.

Permission is hereby granted to build, occupy and use as specified, the building or structure listed below:

| DESCRIPTION | GROUP & DIV. | TYPE RATING | SQUARE FEET | COST/SQ.FT | VALUATION |
|---|---|---|---|---|---|
| Add Electric | to Existing | Storage. (Permit #22728) | | Est. Cost | $ 150.00 |

Type of Heating Data Code Total Valuation $ 150.00

Remarks and Conditions:

Fees

| | |
|---|---|
| CONSTRUCTION | $ 5.00 |
| M.H. SITE | |
| SEWAGE | |
| ENCROACHMENT | |
| ISSUANCE | 5.00 |
| PENALTY | |
| TOTAL | $ 10.00 |

NOTE: PERMIT EXPIRES IF WORK IS NOT BEGUN WITHIN 6 MONTHS OR IS SUSPENDED MORE THAN 6 MONTHS.

RECEIPT NO. 31193 (Cash)

This Work Permit Authorized and permit issued by C. W. Sergent Date 3-28-78 Clerk lv

Bill Skarda, your inspector, can be reached between 8:00 & 8:30 daily.

EL DORADO COUNTY BUILDING DEPARTMENT

№ 02474

ELECTRICAL

TEMPORARY

DATE 1-10-77 PERMIT NO. 22728

OWNER DIXON

ADDRESS End of Green Springs Rd

INSP. TSS AMPS: 200

THIS SERVICE O.K. FOR METER

...icuous Place

...nspections

...RENCE

...rtment

3205

...o Storage

3-1-78

...Y/UNLIMITED

INSPECTOR

| | | |
|---|---|---|
| FOUNDATION | | |
| GIRDERS | | |
| FRAME & LATH | | |
| FIREPLACE | | |
| SHEET ROCK | | |
| STUCCO | | |
| ROOF NAIL | | |
| **ELECTRICAL** | | |
| POWER POLE | | |
| ROUGH | | |
| UNDERGROUND | | |
| METER HOOKUP | | |
| UNDERGR. SERVICE | | |
| TEMP. POWER | | |
| **PLUMBING** | | |
| GROUND | | |
| TOP OUT | | |
| GAS TEST | | |
| SEPTIC TANK LEACH LINES | | |
| PITS BEDS | | |
| SEPTIC SYSTEM FINAL | | |
| **HEATING** | | |
| DUCTS | | |
| FLUES | | |
| H.V.A.C. UNIT | | |
| **INSULATION** | | |
| FLOOR | | |
| WALLS | | |
| CEILING | | |
| WINDOWS | | |
| WEATHERSTRIP | | |
| **FINAL APPROVALS** | | |
| BUILDING | | |
| ELECTRICAL | | |
| PLUMBING | | |
| HEATING & VENTILATION | | |
| INSULATION | | |
| COUNTY HEALTH DEPT | | |
| PUBLIC SEWER | | |

**Post This Card In A Conspicuous Place**

For Inspectors call: 626-2231

*Notice of at least 12 hours required for Inspections.*

**KEEP THIS CARD FOR REFERENCE**

THIS IS YOUR RECORD OF ALL INSPECTIONS

**El Dorado County Building Department**

**INSPECTION RECORD** B-22728

Description of work: Convert Existing Ag. Barn to Storage & Add Elec. end of Green Springs RD.

ADDRESS: Dixon, Robert 12-29-77

OWNER: Owner

BUILDER:

MOBILE HOME PERMIT TEMPORARY UNLIMITED

STRUCTURAL

| INSPECTION | DATE | INSPECTOR |
|---|---|---|
| SETBACK | | |
| FOUNDATION | | |
| GIRDERS | | |
| FRAME & LATH | | |
| FIREPLACE | | |
| SHEET ROCK | | |
| STUCCO | | |
| ROOF NAIL | | |
| **ELECTRICAL** | | |
| POWER POLE | | |
| ROUGH | | |
| UNDERGROUND | | |
| METER HOOKUP | | |
| UNDERGR. SERVICE | | |
| TEMP. POWER | 1-10-78 | [signature] |
| **PLUMBING** | | |
| GROUND | | |
| TOP OUT | | |
| GAS TEST | | |
| SEPTIC TANK LEACH LINES | | |
| PITS BEDS | | |
| SEPTIC SYSTEM FINAL | | |
| **HEATING** | | |
| DUCTS | | |
| FLUES | | |
| **FINAL APPROVALS** | | |
| BUILDING | | |
| ELECTRICAL | 1-10-78 | [signature] |
| PLUMBING | | |
| HEATING & VENTILATION | | |
| COUNTY HEALTH DEPT | | |
| PUBLIC SEWER | | |

# EL DORADO COUNTY

COMMUNITY DEVELOPMENT DEPARTMENT 621-5315
BUILDING DIVISION /626-2511/
360 FAIR LANE, PLACERVILLE, CA 95667

BUILDING PERMIT
PERMIT NUMBER: 89063687

DATE ISSUED: 11/17/89
DATE EXPIRES: +11/17/91
APN:067-051-06 TAC#:100-104
SEC.: 24 TWP: 10 RNG: 8
PARCEL MAP#:
INSPECT.AREA: 400
ROAD? NO
WATER SOURCE: WELL
SEWER SERVICE:SEPTIC

JOB ADDRESS: 3200 VALLE VERDE RD
SUB: LOT: BLK:
DRIVING: W. GREEN VALLEY RD. LEFT GREEN SPRINGS. LEFT VERDE VALLE LN. 3200

| SPECIFIC USE | TYPE | AREA | COST | VALUE |
|---|---|---|---|---|
| DWELLING | VN | 1091 | $47.80 | $ 52.150 |
| GARAGE | VN | 240 | $12.20 | $ 2.928 |
| | | | TOTAL: | $ 55.078 |

WORK CLASS: CONVERSION
USE TYPE: SINGLE FAMILY
OCCUP.GRP.: R3
NO. UNITS: 1 BDMS: 2
CLIMATE ZONE: 12
SNOW LOAD: 20
HEATING TYPE:

REMARKS-
CONVERT AG BARN TO DWELL. W/23205. 22728

LOT SIZE: 20.00 ZONE: AE
SETBACKS-F:30 LS:30 RS:30 R:30
SUPER. DIST.: 1 CT: 307
SCHOOL DIST.: RESCUE
FIRE DIST.:
ROAD DIST.: ED HILLS/SAN.FALLS

APPLICANT
DIXON ROBERT/JOYCE
P.O. BOX 887
FOLSOM CA 95630
(916)933-3644

OWNER
DIXON ROBERT/JOYCE
P.O. BOX 887
FOLSOM CA 95630
(916)933-3644

ARCH/ENGR

| | | |
|---|---|---|
| PERMIT FEE | | $ 441 |
| PLAN CHECK FEE | | $ 220 |
| PRE-PAID PLAN CHECK | ( | $ 220) |
| SEPTIC | | $ 100 |
| SUBTOTAL | | $ 541 |
| HIGH SCHOOL | | $ 513 |
| ELEMENTARY SCHOOL | | $ 1.178 |
| ROAD IMPROVEMENT | | $ 1.785 |
| D.O.T. | | $ 0 |
| TOTAL: | | $ 4.017 |

RECEIPT NUMBER: 103265
METHOD OF PAYMENT: HR
PREPAID RECEIPT NO.:101624

I hereby affirm that I am exempt from the Contractor's License Law for the following reason: I. As owner of the property will do the work myself without hiring any employees. and the structure is not intended for or offered for sale.
I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of California.

I certify that I have read this document and state that the above information is correct. I agree to comply with all local ordinances and state laws relating to building construction, and hereby authorize representatives of this county to enter upon the above-mentioned property for inspection purposes.

N/A SIGNATURE ON APPL.
Permittee Signature

ISSUED BY
Building Official

| STRUCTURAL | DATE | INSP | ELECTRICAL | DATE | INSP | PLUMBING | DATE | INSP | MECHANICAL | DATE | INSP |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Setback | | | Underground | | | Supply | | | Heat/Furnace | | |
| Footing | 10-20-89 | RN | Rough | 11-27-89 | RN | Ground Pl | | | Fire Ctr/Chim | | |
| Slab | | | Main Panel | | | Top Out | 12/7/89 | JM | Woodstove | | |
| Girders | | | Sub Panel | | | Gas Pipe | | | Flues | 12-8-89 | RN |
| Frame | 11-28-89 | RN | Pole | | | INSULATION | | | Underfir. Ducts | | |
| Lath/Sheetrock | 12/5/89 | JM | Grd. Electrode | | | Underfloor | | | Duct | | |
| Stucco | | | | | | Wall | 12/7/89 | JM | | | |
| Roof Deck | | | | | | Ceiling | | | | | |

MOBILE HOME

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Suprt Structure | | | Pedestal | | | Plumbing | | | | | |
| Site Work | | | | | | | | | Gas Line | | |

| FINAL INSPECTION | | | | | |
|---|---|---|---|---|---|
| (2) Bldg. (1) X (3) | | | Woodstove (4) | | |
| Elec. | | | Swim Pool/Spa | | |
| Plumbing (4) | | | Grading | | |
| Mech. | | | Encroachment | | |
| Solar | | | Septic Sys | | |
| MH | | | | | |

| UTILITIES | DATE | INSP |
|---|---|---|
| Temporary Power | | |
| Permanent Power | | |
| Gas Service | | |
| Bond Posted | | |
| Bond Released | | |

* "FOREST" UNIT by (D) OK to 14", site on slab (unmount).

CERTIFICATE OF OCCUPANCY ISSUED/FINAL (4) DATE: 9/30/91 INSP: JM/pr

12/7/89 WINDOWS & DOORS NOT INSTALLED ON ORDER JM

(1) OK per J. Marsh's CN 2-12-90. JB

(2) ~~HT FINAL; See deck permit re: revised energy calcs~~ OK on energy calcs for some to be single) ~~Calcs for single family~~ (Francini's CN) JB

(3) Code guardrails @ doors upstairs. Bldr. to pull deck permit for a final on house JB 2/22/90

(4) PER JB'S CN DATED 2/22/90 "OK TO OCCUPY (NEED A DECK PERMIT FOR FINAL)". DECK PERMIT #65878 JM

| ROUTED TO | DATE |
|---|---|
| HEALTH DEPT. | 10-3-89 |
| ROAD DEPT. | |
| FIRE DEPT. | |
| WATER DIST. | |
| PLANS RETURNED | |

# EL DORADO COUNTY
# COMMUNITY DEVELOPMENT DEPT.
## BUILDING DIVISION
## APPLICATION FOR CONSTRUCTION PERMIT
### APPLICANT TO COMPLETE

Kr. (P)
REC. BY
PLAN CHECK # 63687
PERMIT NUMBER
W23205, 22728

Kr.

Owner Robert F Dixon & Joyce
Mailing Address P.O. Box 887
City & State Folsom Ck 95630
Zip 95630 Telephone (916) 983 3644
Contractor Owner Bal
Address
City & State
Zip Telephone
Class & Lic. # W Comp.
Arch/Eng.
License #
Lending Agency
Branch

A.P.# 067-051-08 TAC# 100-104
Sec. 24 T 10 R 8 Public Sewer Septic
Parcel Map # — Co. Road No
No. of Bedrooms 2 Perc. Test
Water Source Well Supplier

**PLANNING DEPARTMENT USE**

Lot Size 20.00 Zone AE
Min Setbacks: FR 30 RS 30 LS 30 Rear 50
House No. 3200 Valle Verde Rd.
School Dist. Rescue
Super. Dist. / C.T. 307
Variance or Special Use No. Date / /
Road Imp. Dist. 1785.00 Fire Dist. 0
Special Dist.

067 05018100

DRIVING DIRECTIONS: W. Green Valley Rd. Left Green Springs Left Verde Valle Dr. - 3200

**DESCRIPTION OF WORK**

Building Use: Convert. Ag. Barn to Dwelling, deck
Mobile Home Make
Electric Amps
Size State Mfg. Year
Plumbing
Serial # /
Type of Heating
License # /
Sewage Existing Septic
Temporary Permanent Other

103265
12/20/1400

OWNER / CONTRACTOR / AGENT — SIGN ON REVERSE SIDE OF APPLICATION

FOR OFFICE USE ONLY

| APPROVALS | APP. BY | DATE | OCC. | TYPE | SQ. FT. | COST | VALUATION |
|---|---|---|---|---|---|---|---|
| Health | | | R-3 | IN | 1099 | 4790 | 52,150 |
| Planning | ORH | 10/3/89 | Deck | IN | 240 | 1220 | 2,928 |
| Fire Dist. | | | | | | | |
| Sewer | | | | | | | |
| Water | | | | | | | |
| Road Dep. | | | | | Total Valuation $ | | 55078 |

**FEES**

| | |
|---|---|
| Construction | 221 |
| M.H. Site | |
| Sewage | 100 — |
| Encroachment | |
| Penalty | |
| SUB TOTAL | 321 |
| High School | 513 |
| Elementary School | 1178 |
| Special Dist. | |
| Road Imp. Dist. | 1785.00 |
| Fire Dist. | 0 |
| TOTAL FEES | 3797 |

Plans Approved By CW Date 11-13-89 Fee 441 P/C Fee $220 — Rec. No. 101624

710-010 (1/89) Building - White Health - Yellow & Pink Road Department - Green E.I.D. - Goldenrod

# CONTRACTORS—OWNER/BUILDER

I hereby affirm that I have [illegible] application and that the information [illegible] to [illegible] with [illegible] Contractors and [illegible]

**1. LICENSED CONTRACTORS DECLARATION** — I certify that I am licensed under provisions of Chapter 9 (commencing with Section [illegible]) of the Business and Professions Code, and my license is in full force and effect.

Date _____ Contractor _____

License Class & No. _____

**2. OWNER-BUILDER DECLARATION** — I hereby affirm that I am exempt from the Contractors' License Law, Business and Professions Code (Section 7031.5) by one of the following:

(a) I, as owner of the property, will do the work myself without hiring any employees, and the building or structure is not intended or offered for sale (direct of sale or offering for sale of the structure by the owner-builder within one year is presumptive evidence that such structure was undertaken for the purpose of sale). Complete Section #4 below (Section 7031.5).

(b) I, as owner, am contracting with local contractors to construct the project (Section 7044).

(c) I, as owner of the property, will employ workers with wages as their sole compensation. Complete Section #3 below.

(d) I am exempt under Section _____ Reason _____

_____

Date Dec 3, 1999 Owner Robert F Dixon

**3. WORKMEN'S COMPENSATION INSURANCE** — I hereby affirm that I have a certificate of Workmen's Compensation Insurance, and or a certified copy thereof.

Policy No. _____ Company _____ Exp. Date _____

____ Certified copy is hereby furnished.

____ Certified copy is on file with the Building Department.

Date _____ Applicant _____

If you do not intend to employ any person so as to become subject to the Workmen's Compensation Law, complete the following:

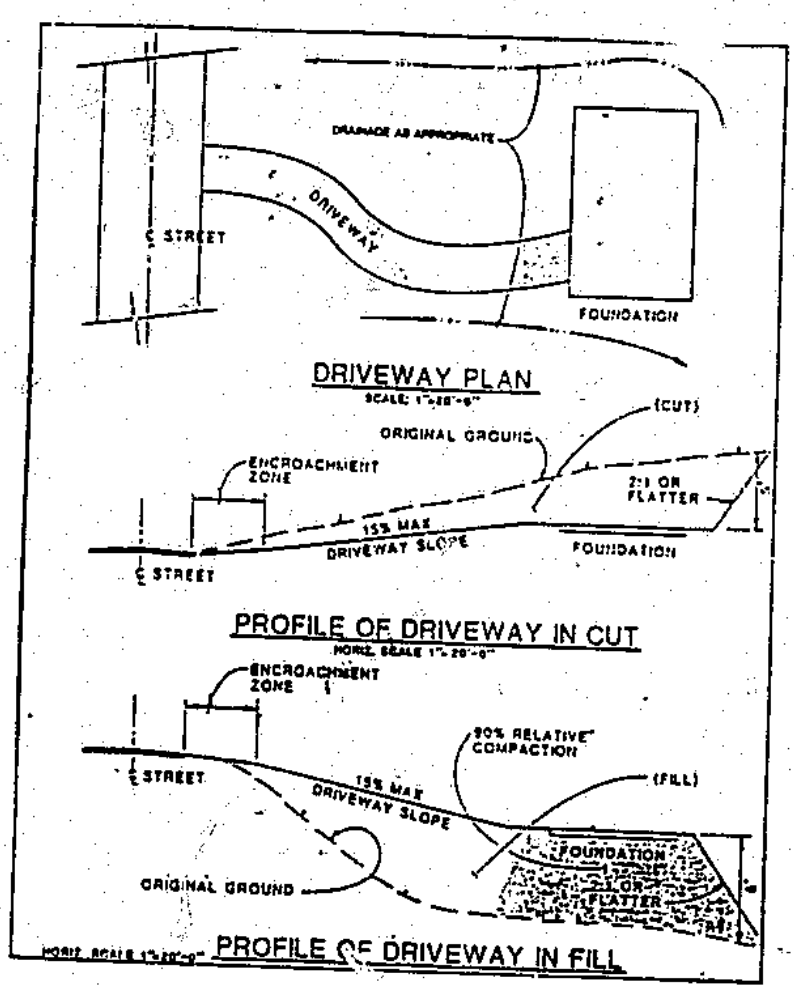
**4. CERTIFICATE O[illegible] [illegible]RKMEN'S COMPENSATION INSURANCE** — I certify that in the performance of the work for which th[illegible] not employ any person in any manner so as to become subject to the Workmen's Compensation L[illegible]

Date Oct 3 19[illegible] [illegible] Robert F Dixon

**NOTE:** If, after making this Certificate, you should become subject to Workmen's Compensation provisions of the Labor Code, you must forthwith comply or the permit shall be deemed revoked.

## SINGLE FAMILY PRESCRIPTIVE STANDARDS
(effective December 9, 1988)

1. All building plan applicants shall provide a plan view and cross-sectional profile of the driveway as shown below. Show the encroachment from edge of road through to the house pad, the limits of grading showing original ground, the proposed finish grade, the property line, and proposed drainage courses.




2. Please answer the following questions by checking the appropriate box.

| Yes | No | |
|---|---|---|
| [ ] | [X] | Will the driveway grade exceed 15%? |
| [ ] | [X] | Will the cut or fill earthwork exceed 5 feet in height? |
| [ ] | [X] | Will the excavation or fill quantity exceed 250 cubic yards?. |
| [ ] | [X] | Will removal, plowing under, or burial of more than 10,000 square feet of surface area or slopes 10% or greater occur? |
| [ ] | [X] | Will the grading change existing drainage courses (ditches or swales) on the lot or parcel? |

When any of the above conditions occur, the landowner or agent must apply for a grading permit and supply an erosion and sediment control plan.

The Department of Transportation shall review and approve a grading and erosion and sediment control plan prior to issuance of building permit. The Department of Transportation shall complete review within seven working days of receipt of the plan or it shall be deemed approved as submitted.

3. Exposed slopes (cut or fill) shall be stabilized with erosion control materials prior to occupancy. Specifications on all erosion and sediment control practices are in the "Erosion and Sediment Control Guidelines for Developing Areas of the Sierra" dated November 1981. This publication may be found in the Public Library. Copies are also on file in the Building Department and the Department of Transportation.

Robert Tate Fulton — Robert T. Fulton — 10/3/89 — 029-044-25 — 63687

OWNER'S NAME (Please Print) — OWNER OR AGENT SIGNATURE — DATE — ASSESSOR'S PARCEL NO. — PLAN CHECK/PERMIT NO.

COUNTY OF
**EL DORADO**

# COMMUNITY DEVELOPMENT DEPARTMENT

BUILDING DIVISION

MAIN OFFICE:
360 FAIR LANE
PLACERVILLE, CA 95667

(916) 621-5315

SOUTH LAKE TAHOE OFFICE:
1359 JOHNSON BLVD.
P.O. BOX 14506
SOUTH LAKE TAHOE, CA 95702
(916) 573-3145

## OWNER-BUILDER VERIFICATION

ATTENTION: PROPERTY OWNER PLAN CHECK# 63687

An "owner-builder" building permit has been applied for in your name and bearing your signature.

Please complete and return this information at your earliest opportunity to avoid unnecessary delay in processing and issuing your building permit. No building permit will be issued until this verification is received.

1. I personally plan to provide the major labor and materials for construction of the proposed property improvement (yes or no) Yes.

2. I (have/~~have not~~) Yes signed an application for a building permit for the proposed work.

3. I have contracted with the following person (firm) to provide the proposed construction:

Name: _____

Address: _____

City: _____ Phone: _____ Cont. Lic. # _____

4. I plan to provide portions of the work, but I have hired the following person to coordinate, supervise and provide the major work:

Name: _____

Address: _____

City: _____ Phone: _____ Cont. Lic. # _____

5. I will provide some of the work, but I have contracted (hired) the following persons to provide the work indicated:

| Name | Address | Phone | Type of Work |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

Property Owner's Signature: [signature]

Date: Oct. 3, 1989

7/1/80

| ROUTED TO | DATE |
|---|---|
| HEALTH DEPT. | 10-3-89 |
| ROAD DEPT | |
| FIRE DEPT | |
| WATER DIST | |
| PLANS RETURNED | |

# EL DORADO COUNTY
# COMMUNITY DEVELOPMENT DEPT.
## BUILDING DIVISION
## APPLICATION FOR CONSTRUCTION PERMIT
### APPLICANT TO COMPLETE

Kr.
REC. BY
63687
PLAN CHECK #
PERMIT NUMBER
W/23205, 22728

Kr.

Owner Robert F Dixon & Joyce
Mailing Address P.O. Box 887
City & State Folsom CA 95630
Zip 95630 Telephone (916) 983 3644
Contractor Owner Bill
Address
City & State
Zip Telephone
Class & Lic. # W. Comp.
Arch/Eng.
License #
Lending Agency
Branch

A.P.# 067-051-08 TAC# 100-104
Sec. 24 T 10 R 8 Public Sewer Septic
Parcel Map # Co. Road No
No. of Bedrooms 2 Perc. Test
Water Source Well Supplier

**PLANNING DEPARTMENT USE**

Lot Size 20.00 Zone AE
Min Setbacks: FR 0 RS 30 LS 30 Rear 30
House No. 3200 Valle Verde Rd.
School Dist. Rescue
Super. Dist. 1 C.T. 307
Variance or Special Use No. Date / /
Road Imp. Dist. 1785.00 Fire Dist. 0
Special Dist.

DRIVING DIRECTIONS: W. Green Valley Rd. Left Green Springs
Left Verde Valle Ln. 3200

Convert. Ag. Barn

**DESCRIPTION OF WORK**

Building Use: to Dwelling deck
Mobile Home Make
Electric Amps
Size State Mfg. Year
Plumbing
Serial # /
Type of Heating
License # /
Sewage Existing Septic under inspection
Temporary Permanent Other

OWNER / CONTRACTOR / AGENT — SIGN ON REVERSE SIDE OF APPLICATION

**FOR OFFICE USE ONLY**

| APPROVALS | APP. BY | DATE | OCC. | TYPE | SQ. FT. | COST | VALUATION |
|---|---|---|---|---|---|---|---|
| Health | KL | 11-16-89 | | | | | |
| Planning | [illegible] | 10/3/89 | | | | | |
| Fire Dist. | | | | | | | |
| Sewer | | | | | | | |
| Water | | | | | | | |
| Road Dep. | | | | | Total Valuation $ | | |

**FEES**

Construction
M.H. Site
Sewage 100 —
Encroachment
Penalty
SUB TOTAL
High School
Elementary School
Special Dist.
Road Imp. Dist. 1785.00
Fire Dist. 0
TOTAL FEES

Plans Approved By Date Fee P/C Fee $220 Rec. No.

Building - White Health - Yellow & Pink Road Department - Green E.I.D. - Goldenrod

067 05018100

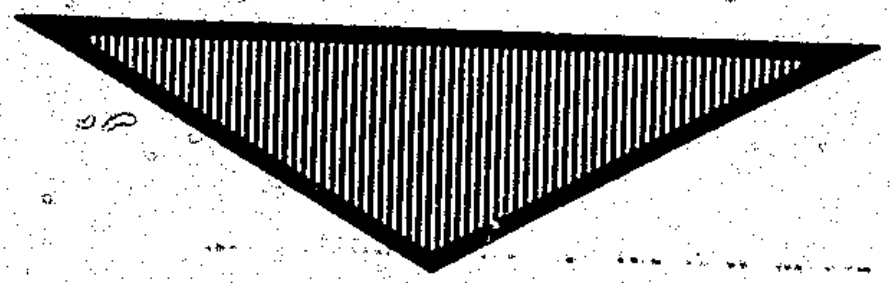
63687
PERMIT NUMBER

**THIS MARKER DENOTES THE PROPERTY LINE LOCATION AT THE CLOSEST POINT TO THE STRUCTURE, I ASSUME FULL RESPONSIBILITY FOR THIS DETERMINATION.**

**(FRONT, REAR AND SIDE LINE TO BE SO MARKED)**

Robert F Dunn

**SIGNATURE**
**OWNER OR CONTRACTOR**



63687

PERMIT NUMBER

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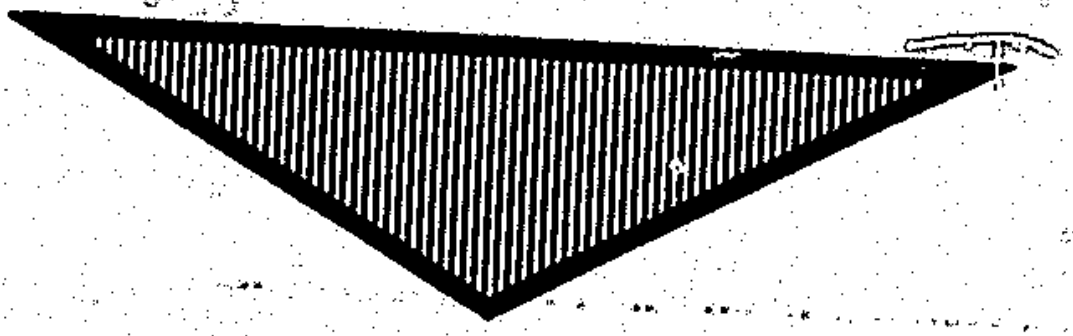
**(FRONT, REAR AND SIDE LINE TO BE SO MARKED)**

Robert F. Dixon

**SIGNATURE**

**OWNER OR CONTRACTOR**



rado County Building Inspection Division

63687

PERMIT NUMBER

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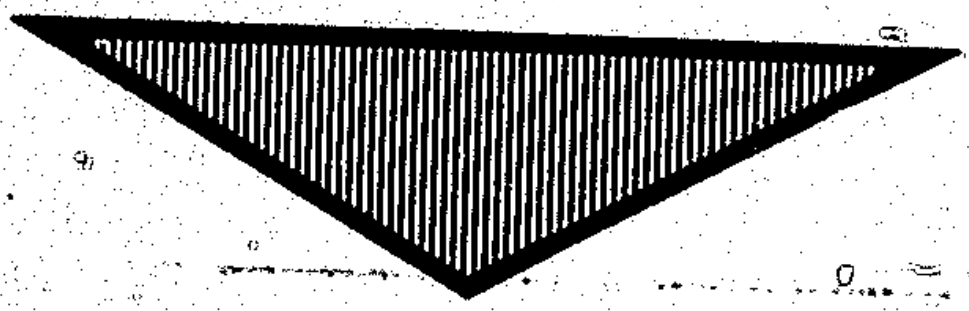
**(FRONT, REAR AND SIDE LINE TO BE SO MARKED)**

Robert F. [illegible]

SIGNATURE

OWNER OR CONTRACTOR



El Dorado County Building Inspection Division

63687

PERMIT NUMBER

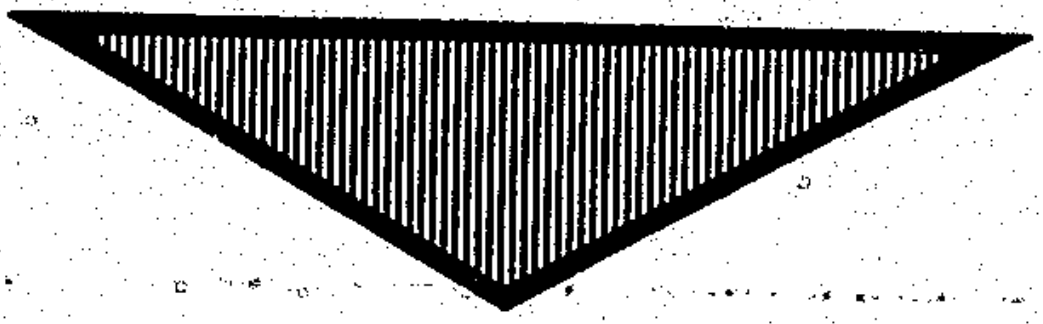
**THIS MARKER DENOTES THE PROPERTY LINE LOCATION AT THE CLOSEST POINT TO THE STRUCTURE, I ASSUME FULL RESPONSIBILITY FOR THIS DETERMINATION.**

**(FRONT, REAR AND SIDE LINE TO BE SO MARKED)**

Robert F Duysen

SIGNATURE

OWNER OR CONTRACTOR



# DEED RESTRICTION CERTIFICATE

## EL DORADO COUNTY

The undersigned declares that he has read and understands the deed restrictions/CC&R's applicable to the subject property, and that the improvement herein applied for does not violate any such restrictions. I also certify that I have submitted plans to the Architectural Control Committee (ACC) or to the local homeowners association, where required by said CC&R's or deed restrictions, and have obtained approval for said improvement.

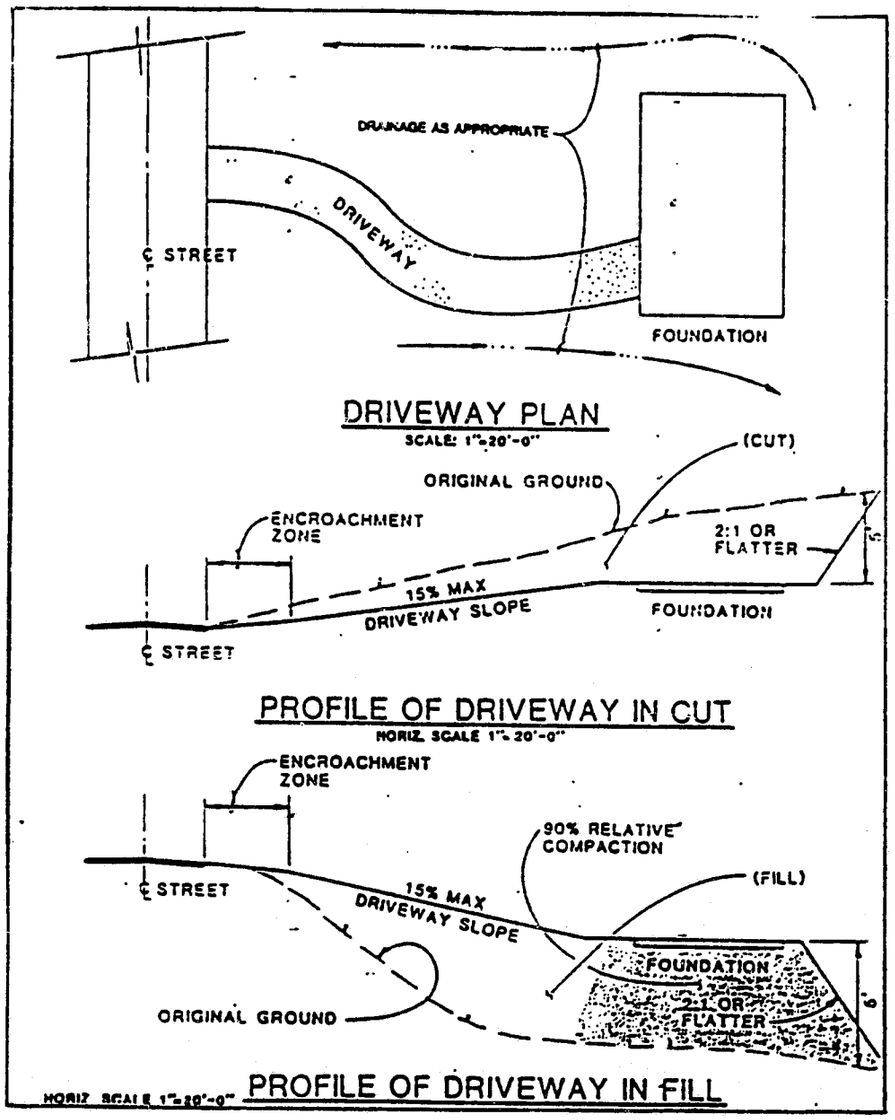
Dated: Oct. 3 1989 Signed: Robert E Dixon

Print: Robert E Dixon

SINGLE FAMILY PRESCRIPTIVE STANDARDS
(effective December 8, 1988)

1. All building plan applicants shall provide a plan view and cross-sectional profile of the driveway as shown below. Show the encroachment from edge of road through to the house pad, the limits of grading showing original ground, the proposed finish grade, the property line, and proposed drainage courses.

Retain W/Job Plans Ow.




2. Please answer the following questions by checking the appropriate box.

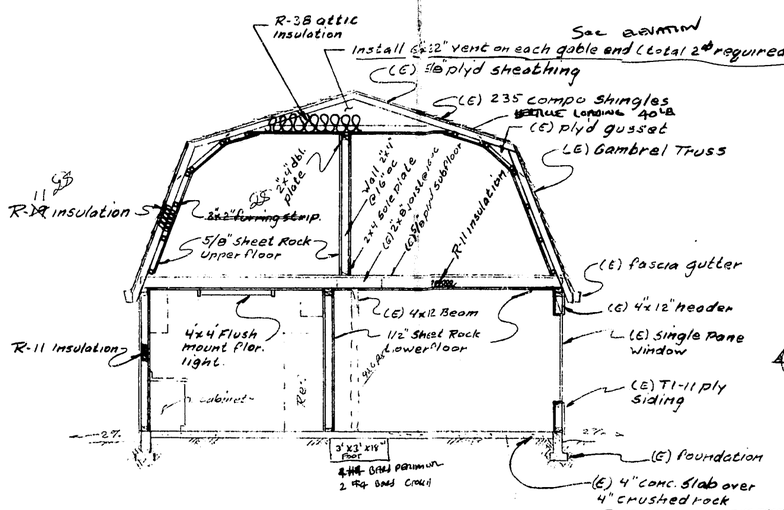
| Yes | No | |
|---|---|---|
| [ ] | [X] | Will the driveway grade exceed 15%? |
| [ ] | [X] | Will the cut or fill earthwork exceed 5 feet in height? |
| [ ] | [X] | Will the excavation or fill quantity exceed 250 cubic yards?. |
| [ ] | [X] | Will removal, plowing under, or burial of more than 10,000 square feet of surface area on slopes 10% or greater occur? |
| [ ] | [X] | Will the grading change existing drainage courses (ditches or swales) on the lot or parcel? |

When any of the above conditions occur, the landowner or agent must apply for a grading permit and supply an erosion and sediment control plan.

The Department of Transportation shall review and approve a grading and erosion and sediment control plan prior to issuance of building permit. The Department of Transportation shall complete review within seven working days of receipt of the plan or it shall be deemed approved as submitted.

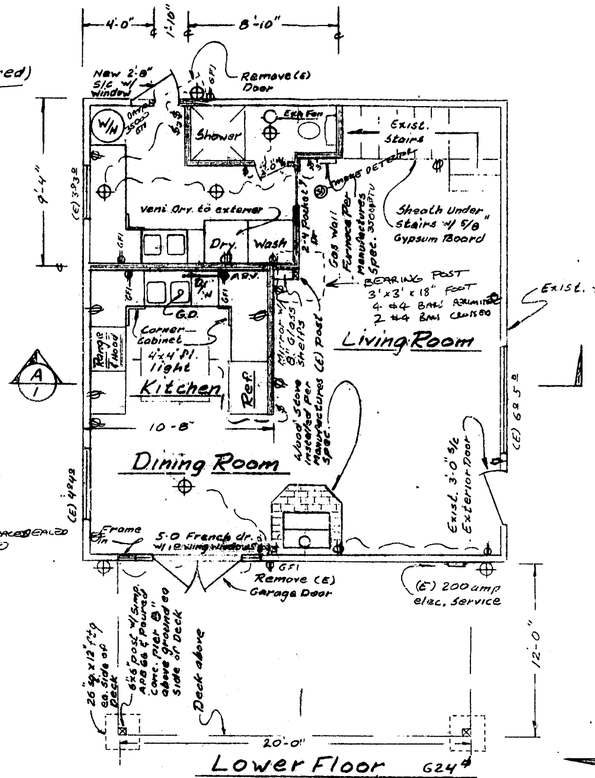
3. Exposed slopes (cut or fill) shall be stabilized with erosion control materials prior to occupancy. Specifications on all erosion and sediment control practices are in the "Erosion and Sediment Control Guidelines for Developing Areas of the Sierra" dated November 1981. This publication may be found in the Public Library. Copies are also on file in the Building Department and the Department of Transportation.

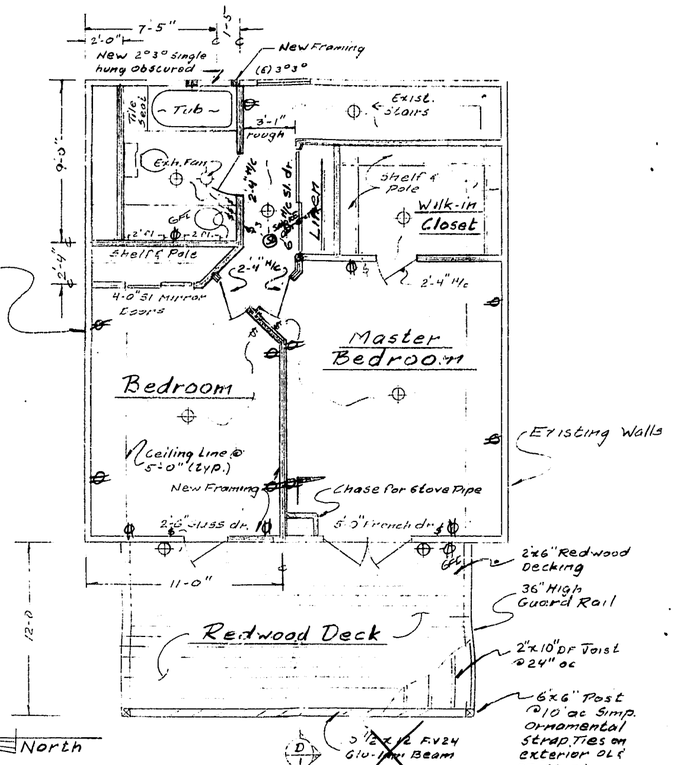
| Robert F. Dixon | Robert F. Dixon | 10/3/89 | 067-057-08 | 63687 |
|---|---|---|---|---|
| OWNER'S NAME (Please Print) | OWNER OR AGENT SIGNATURE | DATE | ASSESSOR'S PARCEL NO. | PLAN CHECK/PERMIT NO. |




Section A (1) 1/4"=1'

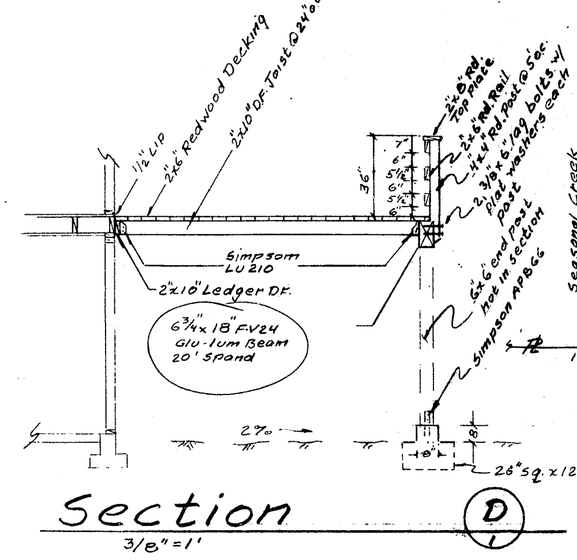
Sac elevation



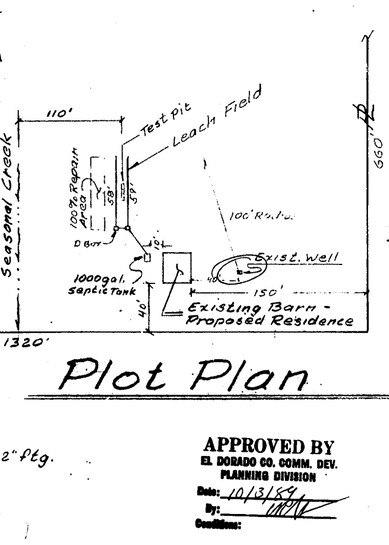




Floor Plan 1/4"=1'

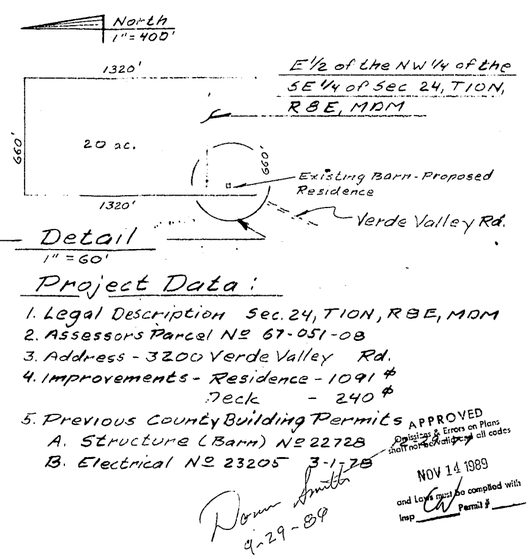
North




Section D (1) 3/8"=1'




Plot Plan




Detail 1"=60'

## Project Data:

1. Legal Description Sec. 24, T10N, R8E, MDM
2. Assessors Parcel Nº 67-051-08
3. Address - 3200 Verde Valley Rd.
4. Improvements - Residence - 1091 #
   Deck - 240 #
5. Previous County Building Permits
   A. Structure (Barn) Nº 22728
   B. Electrical Nº 23205

**GENERAL NOTES:**

1. All door and window headers shall be 4" x 12" D.F. #2 or better ~~and shall be insulated with R-19 at exterior walls~~.
2. All exterior walls shall be 2" x 4" studs at 16 o/c with R-11 insulation. All interior walls shall be 2" x 4" studs ~~unless otherwise shown~~.
3. All windows and glass doors shall be dual pane. (ALL NEW WINDOWS)
4. All exterior doors and windows shall be weather stripped.
5. All joints and penetration areas, such as; sole plates, window flashings, corners, ect. shall be caulked and sealed.
6. All exhaust fans shall be damper controls.
7. All doors and windows shall be certified and labeled to meet the current energy requirements. (ALL NEW WINDOWS)
8. Install water heater insulation blanket (R-12 minimum) and insulated the first 5' (R-5 minimum) to and from tank if out conditioned area.
9. All gas appliances shall be equipped with intermittent ignition devices.
10. All insulation shall have the manufacturer's R-Valve label for inspection.
11. All duct shall be installed and insulated per Chapter 10 of the Uniform Mechanical Code.
12. Install a setback thermostat.
13. All faucets shall be Delta fixtures, shall be C.E.C. approved.

**MINIMUM ELECTRICAL REQUIREMENTS:**

1. A duplex outlet is required every 12 ln. ft. on all perimeter walls (2 ln. ft. constitutes a wall) in all habitable rooms.
2. Applicances, such as; a washer, dryer, dishwasher, etc. require a separate 20 amp circuit.
3. Kitchen requires 2-20 amp circuit to counter areas.
4. Bathroom requires one adjacent to wash basin.
5. Smoke detector is required to receive primary power from the building wiring system.
6. Bathroom and kitchen lighting shall be florescent lighting (minimum 25 lumens/watts).
7. Bathroom and garage outlets require G.F.I.
8. All habitable rooms including hallway shall have a switch operated outlet or light fixture.

APPROVED
El Dorado Co. Comm. Dev.
Planning Division
Date: 10/3/89
By:
Conditions:

APPROVED
Omissions & Errors on Plans shall not relieve violation of all codes
NOV 14 1989
and Local ordinances complied with
Permit #

| Nº | Revision | By | Date |
|---|---|---|---|
| 1. | Up stairs Bath | DS | 9-29-89 |
| 2. | Elevation Sheet 2 | DS | 10-11-89 |

# The Dixon Residence

3200 Verde Valley Road
El Dorado Hills Calif.

Drawn By D.A Smith

Date 9/9/89

Sheet 1 of 2

| ROUTED TO | DATE |
|---|---|
| HEALTH DEPT | 2-22-90 |
| ROAD DEPT | |
| FIRE DEPT | |
| WATER DIST | |
| PLANS RETAINED | |

# EL DORADO COUNTY
# COMMUNITY DEVELOPMENT DEPT.
## BUILDING DIVISION
## APPLICATION FOR CONSTRUCTION PERMIT
### APPLICANT TO COMPLETE

REC. BY 65379
PLAN CHECK 65878
PERMIT NUMBER 63687

Owner Robert Dixon
Mailing Address Box 1491
City & State Placerville Calif.
Zip 95667 Telephone 933-5649
Contractor OWNER
Address SAME
City & State
Zip Telephone
Class & Lic. # N/A W. Comp.
Arch/Eng. None
License # N/A
Lending Agency N/A
Branch N/A

A.P.# 067-051-08 TAC#
Sec. 24 T 10 R 8 Public Sewer Septic
Parcel Map # Co. Road
No. of Bedrooms 2 Perc. Test wheeld
Water Source well Supplier

**PLANNING DEPARTMENT USE**

L() Size Zone
Min Setbacks FR RS LS Rear
House No.
School Dist.
Super. Dist. C.T.
Variance or Special Use No. Date / /
Road Imp. Dist. Fire Dist.
Special Dist.

DRIVING DIRECTIONS: Green Valley Road West toward Folsom 3 miles past Bass Lake Rd Left on Greenstone Left on Verde Valley to end 3200 Verde Valley Rd.

**DESCRIPTION OF WORK**

Building Use: SEPARATE PERMIT FOR DECK TO OBTAIN FINAL INSPECTION Mobile Home Make
Electric PRIOR TO DECK COMPLETION. DECK PLAN APPROVED PERMIT # 65687 Amps Size State Mfg. Year
Plumbing Serial # /
Type of Heating License # /
Sewage Temporary Permanent Other

1411 sq ft

OWNER / CONTRACTOR / AGENT — SIGN ON REVERSE SIDE OF APPLICATION

**FOR OFFICE USE ONLY**

| APPROVALS | APP. BY | DATE | OCC. | TYPE | SQ FT. | COST | VALUATION |
|---|---|---|---|---|---|---|---|
| Health | | | Deck | VN | 240 | 12.40 | 2976 |
| Planning X | | | | | | | |
| Fire Dist. | | | | | | | |
| Sewer | | | | | | | |
| Water | | | | | | | |
| Road Dep. | | | | | Total Valuation $ | | 2976 |

X no planning needed approved previously on 63687 per Janet P. 2/20/90

| FEES | |
|---|---|
| Construction | 30 |
| M.H. Site | |
| Sewage | |
| Encroachment | |
| Penalty | |
| SUB TOTAL | |
| High School | |
| Elementary Sch. | |
| Special Dist. | |
| Road Imp. Dist. | |
| Fire Dist. | |
| TOTAL FEES | 30 |

Plans Approved By CB Date 2-21-90 Fee 30 P/C Fee 0 Rec No. 0

710-010(1/89) Building - White Health - Yellow & Pink Road Department - Green E.I.D. - Goldenrod

[illegible]

2/22/90

[illegible]

2. OWNER-BUILDER DECLARATION — [illegible]

[illegible]

(a) [illegible]

[illegible]

(b) [illegible] _____ [illegible] _____

Date 2/22/90 Owner Robert Dixon BY LBC

3. WORKMEN'S COMPENSATION INSURANCE — I hereby affirm that I have a Certificate of Workmen's Compensation Insurance, and or a certified copy thereof.

Policy No. _____ Company _____ Exp. Date _____

____ Certified copy is hereby furnished

____ Certified copy is on file with the Building Department

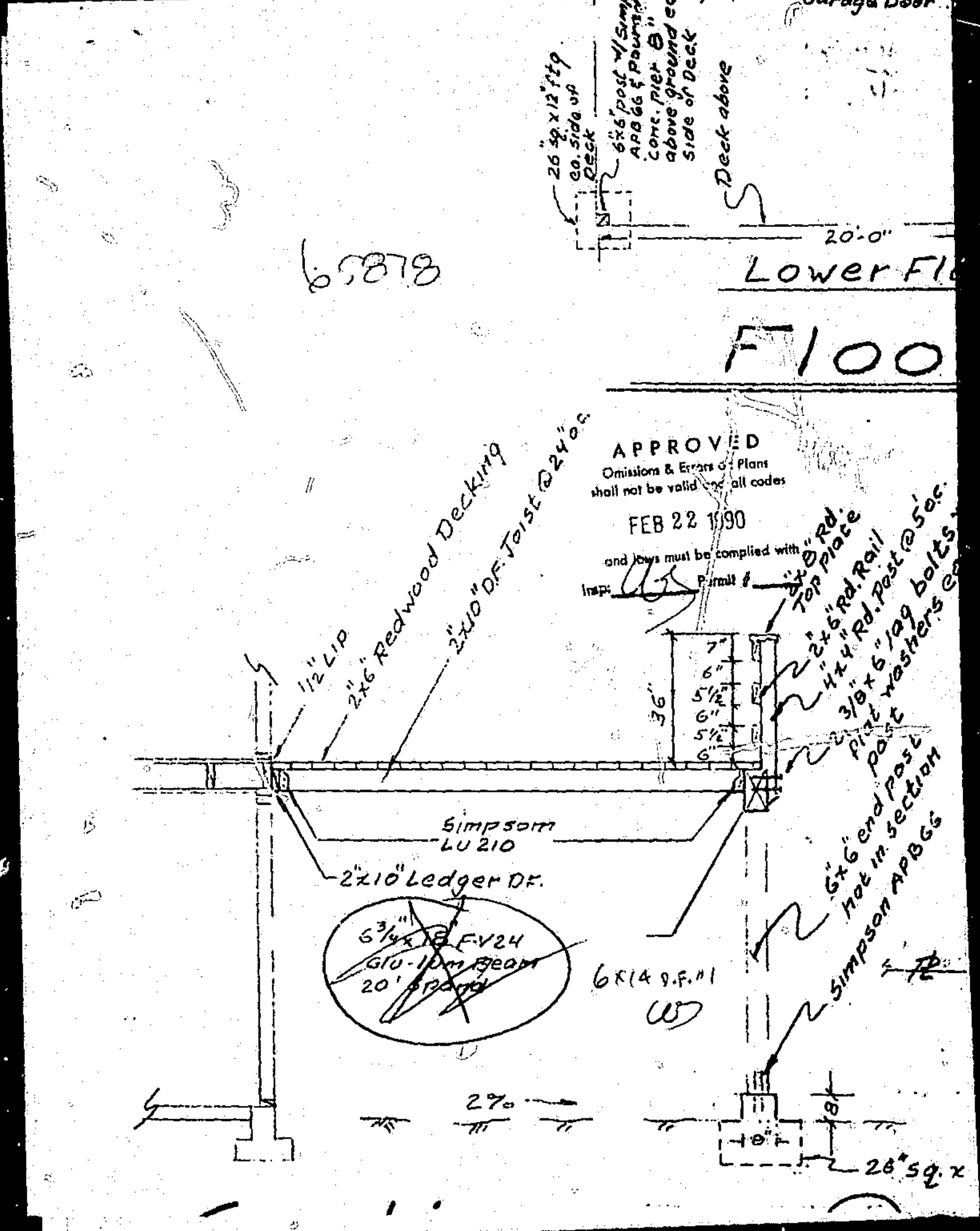
Date _____ Applicant _____

If you do not intend to employ any person so as to become subject to the Workmen's Compensation Law, complete the following:

4. CERTIFICATE OF EXEMPTION FROM WORKMEN'S COMPENSATION INSURANCE — I hereby [illegible] the performance of the work for which this permit is [illegible] Workmen's Compensation Laws of California.

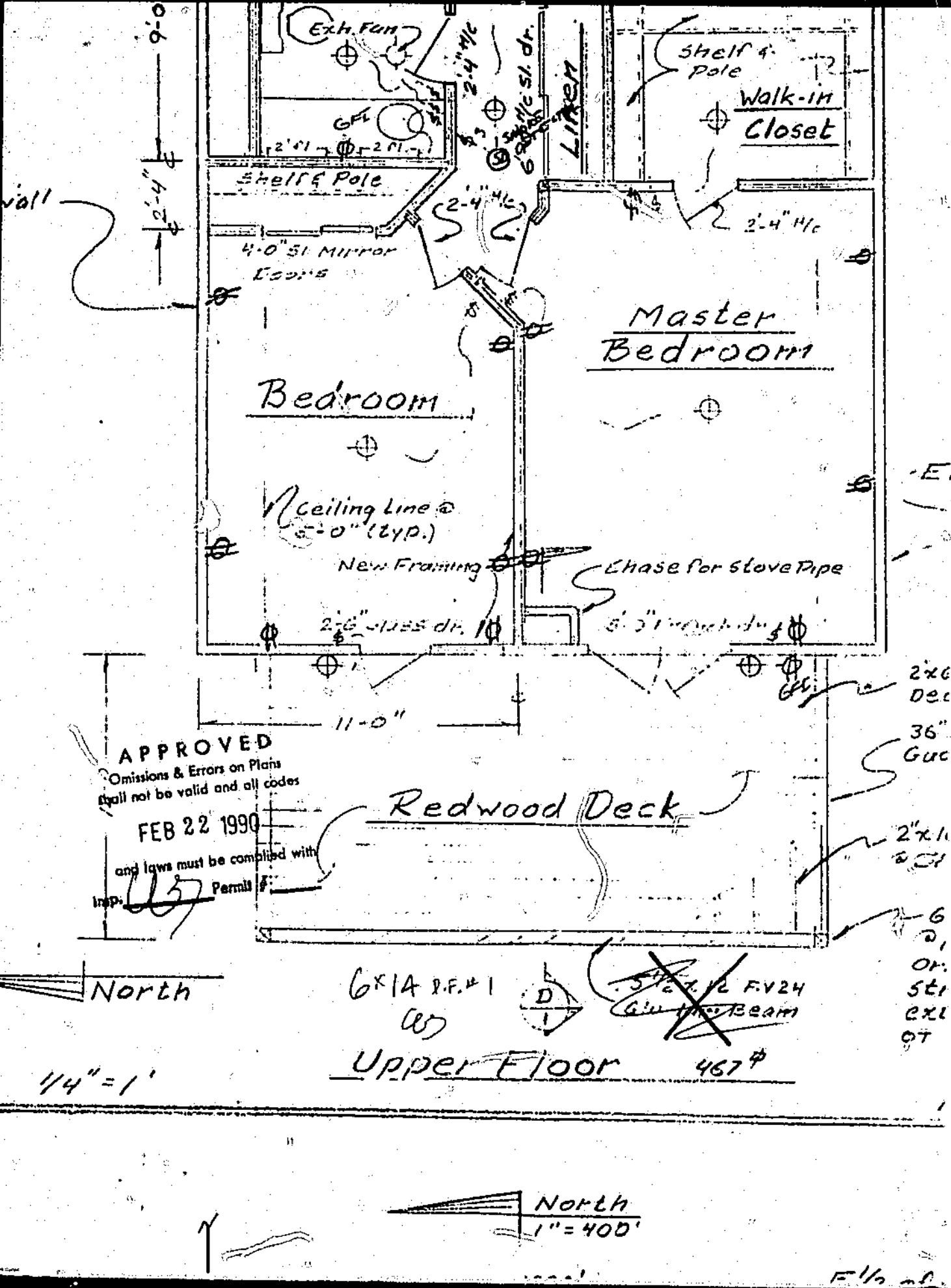
Date 2/22/90 Applicant Robert Dixon BY LBC

NOTE: [illegible]



Garage Door
26" sq. x 12" ftg ea. side of Deck
6"x6" post w/ Simp APB66 & Pourm Conc. pier 8" above ground ea side of Deck
Deck above
20'-0"
Lower Fl
F100
APPROVED
Omissions & Errors on Plans shall not be valid and all codes
FEB 22 1990
and laws must be complied with
Insp: Permit #
1/2" LIP
2"x6" Redwood Decking
2"x10" D.F. Joist @ 24" o.c.
2"x8" Rd. Top plate
2"x6" Rd. Rail
4"x4" Rd. Post @ 5' o.c.
3/8"x6" lag bolts
flat washers ea post
36"
7"
6"
5 1/2"
6"
5 1/2"
6"
Simpson LU 210
2"x10" Ledger DF.
6 3/4"x18" F-V24 Glu-lum Beam 20' Spand
6x14 D.F. #1
6"x6" end post hot in section
Simpson APB66
2%
18"
18"
26" sq. x


65878


Exh. Fan
Shelf & Pole
Walk-in Closet
Linen
Shelf & Pole
4'-0" Sl. Mirror Doors
Master Bedroom
Bedroom
Ceiling Line @ 8'-0" (typ.)
New Framing
Chase for Stove Pipe
11'-0"
Redwood Deck
APPROVED
Omissions & Errors on Plans shall not be valid and all codes and laws must be complied with
FEB 22 1990
Permit #
Insp.
North
6x14 D.F. #1
Upper Floor
467 #
1/4" = 1'
North
1" = 400'

# EL DORADO COUNTY

COMMUNITY DEVELOPMENT DEPARTMENT 621-5315
BUILDING DIVISION /626/2517/
360 FAIR LANE, PLACERVILLE, CA 95667

BUILDING PERMIT
PERMIT NUMBER: 90065878

DATE ISSUED: 2/26/90
DATE EXPIRES: * 2/26/92

JOB ADDRESS: 3200 VALLE VERDE RD
SUB: LOT: BLK:
DRIVING: GREEN VALLEY RD WEST 3 MILES PAST BASS LAKE RD TO LT ON GREENSPRINGS. LT ON VERDE VALLEY TO ADDRESS AT END

APN:087-051-08 TAC#: 100-104
SEC.: 24 TWP: 10 RNG: 8
PARCEL MAP#:
INSPECT. AREA: 400
ROAD? N/A
WATER SOURCE: WELL
SEWER SERVICE: SEPTIC

| * SPECIFIC USE TYPE | AREA | COST | VALUE |
|---|---|---|---|
| DECK | 240 | $12.40 | $ 2,976 |
| | | TOTAL: | $ 2,976 |

* WORK CLASS: NEW
* USE TYPE: DECKS
* OCCUP. GRP.:
* CLIMATE ZONE:
* SNOW LOAD:
* HEATING TYPE:

REMARKS-
DECK TO FINAL @3607 NO FEE TAKEN 2/22/90
ORIGINALLY APPROVED W/DWG PERMIT

LOT SIZE: 20.00 ZONE: AE
SETBACKS-F:30 LS:30 RS:30 R:30
SEWER. DIST.: 1 LT: 307
SCHOOL DIST.: RESCUE
FIRE DIST.:
ROAD DIST.: EL HILLS/SAM.FALLS

| | | |
|---|---|---|
| APPLICANT | DIXON<br>P.O. 1991<br>PLACERVILLE<br>(916)933-5644 | ROBERT/JOYCE<br>CA 95667 |
| OWNER | DIXON<br>P.O. 1991<br>PLACERVILLE<br>(916)933-5644 | ROBERT/JOYCE<br>CA 95667 |
| ARCH/ENGR | | |

| | |
|---|---|
| PERMIT FEE | $ 30 |
| PRE-PAID PLAN CHECK ( ) | |
| SUBTOTAL | $ 30 |
| D.O.T. | $ 0 |
| TOTAL: | $ 30 |

RECEIPT NUMBER: 901411
METHOD OF PAYMENT: SW
PREPAID RECEIPT NO.:

I hereby affirm that I am exempt from the Contractor's License Law for the following reason: I, as owner of the property will do the work myself without hiring any employees, and the structure is not intended for or offered for sale.
I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of California.

I certify that I have read this document and state that the above information is correct. I agree to comply with all local ordinances and state laws relating to building construction, and hereby authorize representatives of this county to enter upon the above-mentioned property for inspection purposes.

N/A SIGNATURE ON APPL.
Permittee Signature

ISSUED BY
Building Official

| STRUCTURAL | DATE | INSP. | ELECTRICAL | DATE | INSP. | PLUMBING | DATE | INSP. | MECHANICAL | DATE | INSP. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Setback 30 | | | Underground | | | Supply | | | Heat/Furnace | | |
| Footing | | | Rough | | | Ground Pl. | | | Fireplc/Chim. | | |
| Slab | | | Main Panel | | | Top Out | | | Woodstove | | |
| Girders | | | Sub Panel | | | Gas Pipe | | | Flues | | |
| Frame | | | Pole | | | INSULATION | | | Underfir. Ducts | | |
| Latt/Sheetrock | | | Grd. Electrode | | | Underfloor | | | Duct | | |
| Stucco | | | | | | Wall | | | | | |
| Roof Deck | | | | | | Ceiling | | | | | |

MOBILE HOME

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Suprt Structure | | | Pedestal | | | Plumbing | | | | | |
| Site Work | | | | | | | | | Gas Line | | |

| FINAL INSPECTION | | | | | |
|---|---|---|---|---|---|
| Bldg. | | | Woodstove | | |
| Elec. | | | Swim Pool/Spa | | |
| Plumbing | | | Grading | | |
| Mech. | | | Encroachment | | |
| Solar | | | Septic Sys. | | |
| M/H | | | Deck 10/1/91 USE | | |

| UTILITIES | DATE | INSP. |
|---|---|---|
| Temporary Power | | |
| Permanent Power | | |
| Gas Service | | |
| Bond Posted | | |
| Bond Released | | |

CERTIFICATE OF OCCUPANCY ~~ISSUED~~/FINAL Deck DATE 10/1/91 INSP: Woodstock

(1) DECK FOOTINGS (FRONT) APPROVED 11/28/89 BY RN ON PERMIT # 63687. JW

EL DORADO COUNTY BUILDING DEPARTMENT
PERMIT REPRINT

APN #: 067-420-14-1 PERMIT #: 120295 - 1

PERMIT TYPE: ELECTRICAL-NEW-WELL (RESIDENTIAL)

| SPECIFIC USE | TYPE | AREA | COST | VALUE |
|---|---|---|---|---|
| ELECT. TO WELL | | | | 300 |

TOTAL: $ 300

LEGAL DESCRIPTION: SEC 24 10 8

ZONING : AE
WATER SOURCE : WELL
NUMBER OF UNITS: 0

HEATING TYPE :
SEWER SERVICE : SEPTIC
NUMBER OF BEDROOMS: 0

DATE ISSUED: 07/28/1999
DATE REACTIVATED:

DATE EXPIRES: 07/27/2001
DATE RENEWED:

JOB ADDRESS: 1856 GREEN VALLEY RD

DIRECTIONS: GREEN VALLEY ROAD TO MALCOMB DIXON 2ND DRIVE ON RIGHT THRU GATE AND ACROSS THE BRIDGE YOU WILL SEE OLD ABANDONED HOUSE THE POWER POLE IS IN THE FRONT YARD PAGE 27 D 1

APPLICANT : MICHAEL PETERS (916) 939-3784
3737 CHELSEA RD
CAMERON PARK, CA 95682

OWNER : MARLIN LTD (916) 939-3784
3737 CHELSEA RD
CAMERON PARK, CA 95682

ARCHITECT : REG. # :

ENGINEER : REG. # :

CONTRACTOR: LICENSE: 0

12

NP - F4F

# EL DORADO COUNTY BUILDING DEPARTMENT

PLACERVILLE: (530) 621-5315 TAHOE: (530) 573-3330
INSPECTIONS: (530) 621-5377

APPLICANT: MICHAEL PETERS
APPL PHONE: (916) 939-3784
APPLICATION DATE: 07/28/1999
DATE ISSUED: 07/28/1999
EXPIRATION DATE: 07/27/2001

SCHOOL DIST: RESCUE UNION
JOB ADDRESS: **1856 GREEN VALLEY RD**
RESIDENTIAL
ELECTRICAL

**PERMIT: 120295-1** **APN: 067-420-14-1**

**DIRECTIONS:** GREEN VALLEY ROAD TO MALCOMB DIXON 2ND DRIVE ON RIGHT THRU GATE AND ACROSS THE BRIDGE YOU WILL SEE OLD ABANDONED HOUSE THE POWER POLE IS IN THE FRONT YARD PAGE 27 D 1

**NOTE:** POWER TO WELL FOR AGRICULTURAL PURPOSES, CATTLE, VEGTABLES
NOT FOR HABITATION
SETBACKS: F: 30 LS: 0 RS 30 R: 30 LOT SIZE: 40.000 COUNTY ROAD: YES

| SPECIFIC USE | TYPE | AREA | SPECIFIC USE | TYPE | AREA |
|---|---|---|---|---|---|
| ELECT. TO WEL | - | | | | |

| INSPECTION | DATE | INSPECTOR | INSPECTION | DATE | INSPECTOR |
|---|---|---|---|---|---|
| ELECTRICAL 8' Rod | | | | | |
| 35. GND ELECTROD | 8/12/99 | Elma | | | |
| UTILITIES | | | | | |
| 68. PERM. POWER | 8/12/99 | Elma | 200A | | |
| APPROVALS | | | | | |
| 102. PERMIT FINAL | __/__/__ | | | | |

6/18/03 Final OK Per Noted inspec

09/12/00 BLOLB **PERMIT # 120295-1 IS O.K. - ACCORDING TO EHD LIST THIS IS NOT LISTED AS "-6"**

ADDITIONAL REMARKS: #120295

8-12-99 elect, power tag

# EL DORADO COUNTY BUILDING DEPARTMENT - PERMIT APPLICATION

## APPLICANT TO COMPLETE

ASSESSOR'S PARCEL NUMBER: 67-420-14
SITE ADDRESS: 1856 Green Valley Rd
OWNER'S NAME Marlin LTD
Mailing Address 3737 Chilson Rd
City Cameron Park State Ca Zip 95682
Phone (916) 933-3784 FAX (530) 672-2846
APPLICANT'S NAME Michael J. Peters
Mailing Address Same as Above
City _____ State _____ Zip _____
Phone (_____) _____ FAX (_____) _____
EMAIL ADDRESS: _____
CONTRACTOR'S NAME _____
Mailing Address _____
City _____ State _____ Zip _____
Phone (_____) _____ FAX (_____) _____
Business Lic.# _____ ☐ County ☐ SLT ☐ Placerville
State Cont. Lic. # and class _____ Exp. Date _____
ENGINEER: _____ Lic. # _____
ARCHITECT: _____ Lic. # _____

# of Bedrooms _____
Second Dwelling: (yes) (No)
Public Water: ( yes) ( No)
Public Sewer: (yes) (No)

Septic: (yes) (No)
Heat Type: (gas) (electric)(oil) (wood) (solar) (other)
Map Page: 27-01
DESCRIPTION OF WORK/COMMENTS: Fences to will for Agriculture Purposes Strawberries Cattle, Veg.
Valuation of Job (Cost): _____

## OFFICE USE ONLY

120295
APPLICATION NUMBER
APPLICATION DATE: 7-28-99
REC'D. BY: _____
APPLICANT PREFERS RESPONSE BY:
☐ PHONE ☐ FAX ☐ EMAIL
COMMENTS: See Notarized Letter of Authorization
$30

Sec. 19825 of the Health and Safety Code requires that the following declarations be included as part of a Building Permit.
**NOTE: MORE THAN ONE SIGNATURE MAY BE REQUIRED * * ***

**OWNER-BUILDER DECLARATION:** I hereby affirm under penalty of perjury that I am exempt from the Contractor's License Law for the following reason: (Sec. 7031.5, Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractor's License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he or she is exempt therefrom and the basis for the alleged exemption. Any violation of Sec. 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred ($500) dollars): (check one)

☒ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec 7044, Business and Professions Code. The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself or through his or her own employees, provided that such improvements are *not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the* burden of proving that he did not build or improve for the purpose of sale).

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License Law).

☐ I am exempt under Sec. _____ B & P C for this reason: _____

Owner's Signature: Michael J. Peters Date: 7-28-99 C.D.L./ID#: K0835730 Exp. Date: 2003

**LICENSED CONTRACTOR'S DECLARATION:** I hereby affirm that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code and my license is in full force and effect.

Contractor's Signature (if none, state NONE) _____ Lic. #/Class _____ Exp. Date _____

**WORKERS' COMPENSATION DECLARATION:** I hereby affirm under penalty of perjury one of the following declarations: (check one)

☐ I have and will maintain a certificate of consent to self-insure for workers' compensation, as provided by Sec. 3700 of the Labor Code, for the performance of the work for which this permit is issued.

☐ I certify that in the performance of the work for which this permit is issued, I shall not employ any persons in any manner so as to become subject to the workers' compensation laws of California, and agree that if I should become subject to the workers' compensation provisions of Sec. 3700 of the Labor Code, I shall forthwith comply with those provisions.

☒ I have and will maintain workers' compensation insurance, as required by Sec. 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are: (This section need not be completed if the *permit is for one hundred ($100) dollars or less.)*

Insurance Company: Michael J. Peters Exp. Date: 7-28-99 Policy No.: _____

Applicant's Signature: _____

WARNING: FAILURE TO SECURE WORKER'S COMPENSATION COVERAGE IS UNLAWFUL, AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS ($100,000), IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.

**CONSTRUCTION LENDING AGENCY:** I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097 Civil Code)

Lender's Name and Address: (if none, state NONE) _____

**I certify that I have read this application and state that the above information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction, and hereby authorize representatives of this county to enter upon the above-mentioned property for inspection purposes. I REALIZE THAT APPLICATIONS FOR PERMITS BECOME NULL AND VOID 360 DAYS FROM APPLICATION DATE IF THE PERMIT IS NOT ISSUED.**

Applicant or Agent's Signature Michael J. Peters Date 7-28-99

**PLEASE NOTE: ALL INFORMATION PROVIDED ON THIS FORM IS "PUBLIC RECORD" AND AVAILABLE TO THE PUBLIC UPON REQUEST**

Michael J. Peters

# DEED RESTRICTION CERTIFICATE
## EL DORADO COUNTY

Assessor's Parcel Number: 067-420-14 Permit # 120295

The undersigned declares that he has read and understands the deed restrictions/CC&Rs applicable to the subject property, and that the improvement herein applied for does not violate any such restrictions. I also certify that I have submitted plans to the Architectural Control Committee (ACC) or to the local homeowners association, where required by said CC&Rs or deed restrictions, and have obtained approval for said improvement.

DATED: 7-28-99 SIGNED: [signature]

PRINT: Michael S. Peters

#120295

July 27, 1999

EL DORADO COUNTY BUILDING DEPT.
PLACERVILLE, CA

RE: PARCEL NUMBER 67-420-14 1856 GREEN VALLEY RD., EL DORADO HILLS, CA

PLEASE ACCEPT THIS AS MY AUTHORIZATION FOR MIKE PETERS TO ACT ON MY BEHALF WITH REGARDS TO THE ABOVE PARCEL NUMBER.

DAVID LONG

The Original was Received on 1-28-99

#120295

State of California )
)
County of EL DORADO )

On JULY 27, 1999 before me, GAYLE CHASE JOHNSTON
Notary Public, personally appeared DAVID LONG

XX personally known to me

- OR -

_____ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s) or the enity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal

Signature _____

GAYLE CHASE JOHNSTON
Comm. # 1222880
NOTARY PUBLIC - CALIFORNIA
El Dorado County
My Comm. Expires June 19, 2003

#120295

RECORDING REQUESTED BY AND WHEN RECORDED MAIL TO:

RUTAN & TUCKER
P.O. Box 1950
Costa Mesa, CA 92628-1950
Attn: Lynn Connors

DOC # 93-0457863
09-JUL-1993 03:59 PM

Recorded in Official Records
of Orange County, California
Lee A. Branch, County Recorder
Page 1 of 2 Fees: $ 8.00
Tax: $ 0.00

SPACE ABOVE THIS LINE FOR RECORDER'S USE

State of California

Office of
March Fong Eu
Secretary of State
SACRAMENTO

*I, MARCH FONG EU, Secretary of State of the State of California, hereby certify:*

*That the annexed transcript of* 1 *page(s) was prepared by and in this office from the record on file, of which it purports to be a copy, and that it is full, true and correct.*

*IN WITNESS WHEREOF,* I execute this certificate and affix the Great Seal of the State of California this

JUN 1 1 1993

March Fong Eu
Secretary of State

OFFICE OF THE SECRETARY OF STATE

SEC/STATE Form LP 2204 (Rev. 1/87) BY ABOVE

CONTINUATION, CANCELLATION AND MERGER IS CHANGED TO: ☐ NUMBER OF PAGES ATTACHED ☐

(PLEASE INDICATE NUMBER OF PAGES)

2. IT IS HEREBY DECLARED THAT I AM (WE ARE) THE PERSON(S) WHO EXECUTED THIS AMENDMENT OF THE IDENTIFIED CERTIFICATE OF LIMITED PARTNERSHIP, WHICH EXECUTION IS MY (OUR) ACT AND DEED (SEE INSTRUCTIONS)

The N.J. Long Company, Inc., a California corporation

SIGNATURE | SIGNATURE

General Partner 5/13/93

POSITION OR TITLE | DATE | POSITION OR TITLE | DATE

By: [signature]

SIGNATURE | SIGNATURE

President 5/13/93

POSITION OR TITLE | DATE | POSITION OR TITLE | DATE

3. RETURN ACKNOWLEDGMENT TO:

NAME Marlon, Ltd.
ADDRESS Rutan & Tucker
CITY 611 Anton Blvd., Suite 1400
STATE Costa Mesa, CA 92626-1998
ZIP CODE Atten: Deborah L. Huennekens

SEC/STATE REV 1/93

FORM LP-2 — FILING FEE $18.00
Approved by Secretary of State

THIS SPACE FOR FILING OFFICER USE

84 304 00060

FILED
In the office of the Secretary of State of the State of California
MAY 18 1993
March Fong Eu
MARCH FONG EU
SECRETARY OF STATE

#120295

# State of California
## Secretary of State

Form LP-2

# AMENDMENT TO CERTIFICATE OF LIMITED PARTNERSHIP

**IMPORTANT—Read instructions on back before completing this form**

**This Certificate is presented for filing pursuant to Section 15622, California Corporations Code.**

1. SECRETARY OF STATE FILE NO. (ORIGINAL CERTIFICATE—FORM LP-1)
8430400060

2. NAME OF LIMITED PARTNERSHIP
Marlon, Ltd., a California limited partnership

3. THE CERTIFICATE OF LIMITED PARTNERSHIP IS AMENDED AS FOLLOWS: COMPLETE APPROPRIATE SUB-SECTION(S) CONTINUE ON SECOND PAGE IF NECESSARY.

A. THE LIMITED PARTNERSHIP NAME IS CHANGED TO:

B. PRINCIPAL EXECUTIVE OFFICE ADDRESS CHANGE
ADDRESS: 1962 E. Lemon Heights Drive
CITY: Santa Ana STATE: CA ZIP CODE: 92705

E. GENERAL PARTNER NAME CHANGE:
OLD NAME:
NEW NAME:

C. CALIFORNIA OFFICE ADDRESS CHANGE
ADDRESS: 1962 E. Lemon Heights Drive
CITY: Santa Ana STATE: CA ZIP CODE: 92705

F. GENERAL PARTNER(S) WITHDRAWN:
NAME: Daniel R. Long
NAME:

D. GENERAL PARTNER ADDRESS CHANGE
NAME:
ADDRESS:
CITY STATE: ZIP CODE

G. GENERAL PARTNER ADDED:
NAME: The D.J. Long Company, Inc., a California corporation
ADDRESS: 1962 E. Lemon Heights Drive
CITY Santa Ana STATE: CA ZIP CODE: 92705

H. PERSON(S) WINDING UP AFFAIRS OF LIMITED PARTNERSHIP
NAME:
ADDRESS:
CITY STATE: ZIP CODE:

I. INFORMATION CONCERNING THE AGENT FOR SERVICE OF PROCESS HAS BEEN CHANGED TO
NAME: David Joe Long
ADDRESS: 1962 E. Lemon Heights Drive
CITY: Santa Ana STATE: CA ZIP CODE: 92705

J. THE NUMBER OF GENERAL PARTNERS REQUIRED TO ACKNOWLEDGE AND FILE CERTIFICATES OF AMENDMENT, RESTATEMENT, DISSOLUTION, CONTINUATION, CANCELLATION AND MERGER IS CHANGED TO: ☐
(PLEASE INDICATE NUMBER)

K. OTHER MATTERS TO BE INCLUDED IN THE CERTIFICATE OF LIMITED PARTNERSHIP ARE AMENDED AS INDICATED ON THE ATTACHED PAGE(S).
NUMBER OF PAGES ATTACHED ☐

4. I/WE HEREBY DECLARE THAT I/WE HAVE EXAMINED THIS AMENDMENT AND KNOW THE CONTENTS THEREOF AND THAT I/WE AM/ARE THE PERSON(S) WHO EXECUTED THIS AMENDMENT TO THE IDENTIFIED CERTIFICATE OF LIMITED PARTNERSHIP, WHICH EXECUTION IS MY/OUR ACT AND DEED (SEE INSTRUCTIONS)

The D.J. Long Company, Inc., a California corporation
SIGNATURE
General Partner 5/13/93
POSITION (GENERAL PARTNER) DATE

By: [signature]
SIGNATURE
President 5/13/93
POSITION OR TITLE DATE

SIGNATURE
POSITION OR TITLE DATE

5. RETURN ACKNOWLEDGMENT TO:
NAME: Marlon, Ltd.
ADDRESS: Rutan & Tucker
CITY: 611 Anton Blvd., Suite 1400
STATE: Costa Mesa, CA 92626-1998
ZIP CODE: Atten: Deborah L. Huennekens

SEC/STATE REV. 1/93

FORM LP-2 — FILING FEE $15.00
Approved by Secretary of State

THIS SPACE FOR FILING OFFICER USE
84 304 00060

FILED
In the office of the Secretary of State of the State of California
MAY 18 1993
March Fong Eu
MARCH FONG EU
SECRETARY OF STATE

ORIGINAL
File with DWR

driller #120295

Page 1 of 1

Owner's Well No. 3

Date Work Began 8-26-98, Ended 9-4-98

Local Permit Agency El Dorado Environmental Management

Permit No. 1435 Permit Date 8-25-98

STATE OF CALIFORNIA

# WELL COMPLETION REPORT

*Refer to Instruction Pamphlet*

No. 530041

DWR USE ONLY — DO NOT FILL IN

STATE WELL NO./STATION NO.

LATITUDE LONGITUDE

APN/TRS/OTHER

## GEOLOGIC LOG

ORIENTATION (✓) X VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)

DEPTH TO FIRST WATER ___ (Ft.) BELOW SURFACE

| DEPTH FROM SURFACE Ft. | to Ft. | DESCRIPTION *Describe material, grain size, color, etc.* |
|---|---|---|
| 0 | 50 | LOOSE ROCK & SOIL |
| 50 | 200 | HARD ROCK |
| | | 125,153 |
| | | Last Bit 6 Yrs |

TOTAL DEPTH OF BORING 200 (Feet)

TOTAL DEPTH OF COMPLETED WELL 200 (Feet)

## WELL OWNER

Name Mike Peters

Mailing Address 3737 Chelsea Road

Cameron Park, CA. 95682

CITY STATE ZIP

## WELL LOCATION

Address 1840 Green Valley Road

City Placerville, Ca. 95667

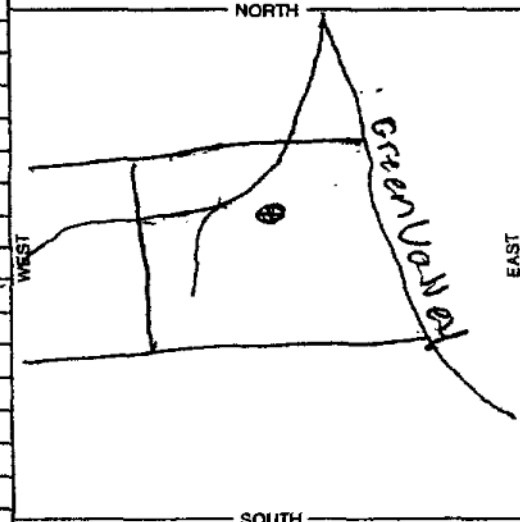
County El Dorado

APN Book 067 Page 420 Parcel 14

or Township ___ Range ___ Section ___

or Latitude ___ DEG. MIN. SEC. NORTH Longitude ___ DEG. MIN. SEC.

## LOCATION SKETCH




*Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc. PLEASE BE ACCURATE & COMPLETE.*

## ACTIVITY (

X NEW WELL

MODIFICATION/REPAI

___ Deepen

___ Other (Spe

___ DESTROY (Descr Procedures and M Under "GEOLOGI

## PLANNED US (✓)

___ MONITORING

WATER SUPPLY

___ Domest

X Public

___ Irrigatic

___ Industri

___ "TEST WELL

___ CATHODIC PR TION

___ OTHER (Spec

DRILLING METHOD Rotary Air FLUID Water

## WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL 25 (Ft.) & DATE MEASURED 94

ESTIMATED YIELD* 30+ (GPM) & TEST TYPE Air lift

TEST LENGTH 4 (Hrs.) TOTAL DRAWDOWN ___ (Ft.)

* *May not be representative of a well's long-term yield.*

## CASING(S)

| DEPTH FROM SURFACE Ft. | to Ft. | BORE-HOLE DIA. (Inches) | TYPE (✓) BLANK | SCREEN | CON-DUCTOR | FILL PIPE | MATERIAL/GRADE | INTERNAL DIAMETER (Inches) | GAUGE OR WALL THICKNESS | SLOT SIZE IF ANY (Inches) |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 53 | 11 | X | | | | PVC | 6+ | 125 | |
| 0 | 100 | 6.5 | | X | | | PVC | 4 | 125 | 2x1/8 |
| 100 | 200 | 6.5 | | X | | | PVC | 4 | 160 | 2x1/8 |

## ANNULAR MATERIA

| DEPTH FROM SURFACE Ft. | to Ft. | TYPE CE-MENT (✓) | BEN-TONITE (✓) | FILL (✓) | FILTER PA (TYPE/SI |
|---|---|---|---|---|---|
| 0 | 53 | X | | | |

## ATTACHMENTS (✓)

___ Geologic Log

___ Well Construction Diagram

___ Geophysical Log(s)

___ Soil/Water Chemical Analyses

___ Other ___

*ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.*

## CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and be

NAME Robert Dawson Drilling & Pumps
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

P.O. Box 1021 Shingle Springs, CA. 95682
ADDRESS CITY STATE ZIP

Signed [signature] WELL DRILLER/AUTHORIZED REPRESENTATIVE 9-8-98 DATE SIGNED 732870 C-57 LICENSE NO.

DWR 188 REV. 7-90

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

#120295

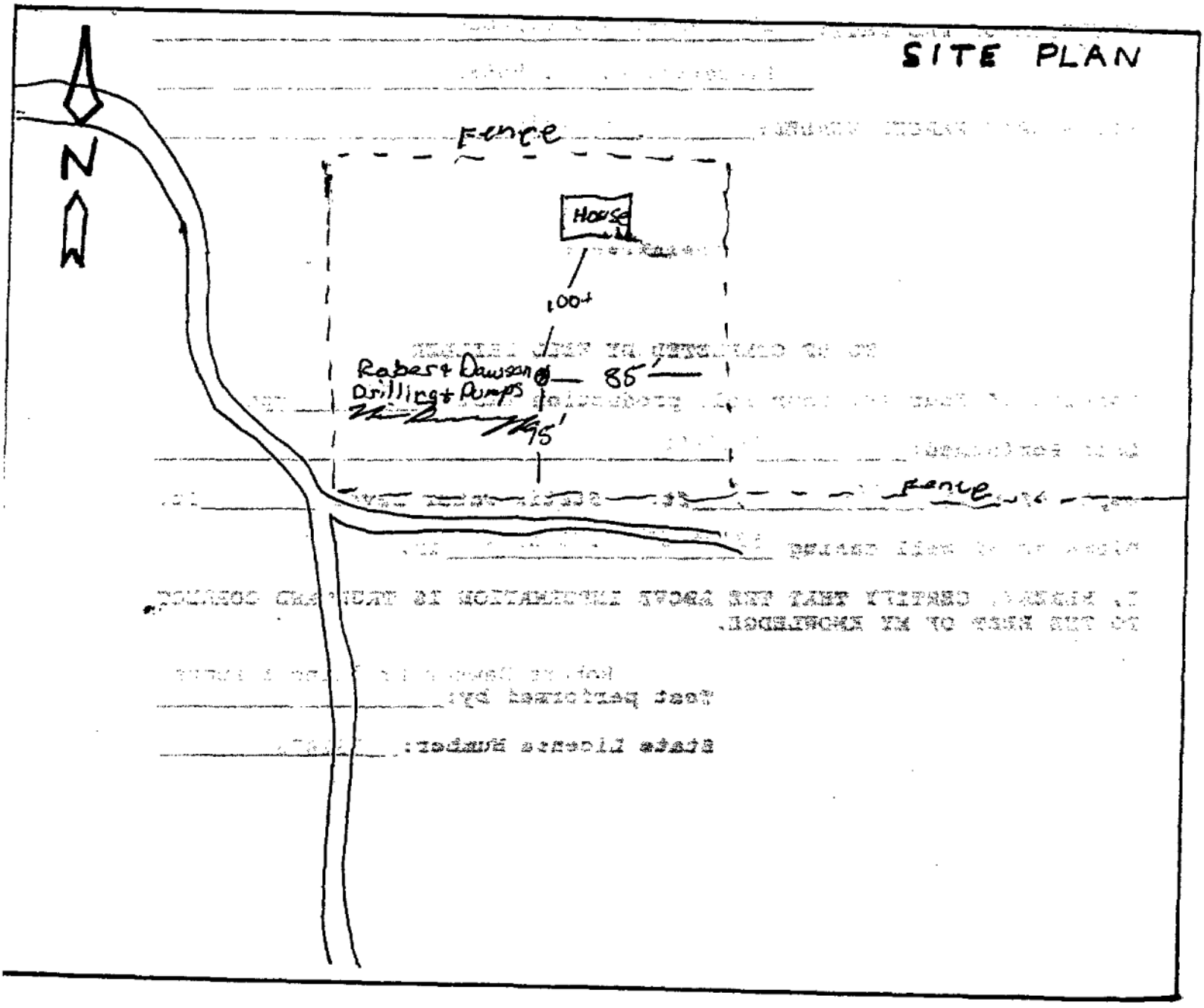
IF WELL PRODUCTION RATE IS LESS THAN 5 GPM:

5 gpm x 240 min. = 1,200 gal

_____ x 240 min. = gal
Prod. rate

_____ gallons of additional storage required

PLOT PLAN TO BE COMPLETED BY WELL DRILLER



120295

**EL DORADO COUNTY ENVIRONMENTAL MANAGEMENT DEPARTMENT**

**DIVISION OF ENVIRONMENTAL HEALTH**

**2850 FAIRLANE CT.**
**PLACERVILLE, CA 95667**
**(916) 621-5300**

# REPORT OF WELL PRODUCTION

**OWNER OF PROPERTY:** Mike Peters

**ADDRESS OF OWNER:** 3737 Chelsea Road

Cameron Park, Ca. 95682

**LOCATION OF PROPERTY:** 1840 Green Valley Road

Placerville, CA. 95682

**ASSESSOR'S PARCEL NUMBER:** 067-420-14

**********

**TO BE COMPLETED BY WELL DRILLER**

**Results of four (4) hour well production test:** 30+ **gpm**

**Date Performed:** 8-25-98

**Depth of well** 200 **ft.** **Static water level** _____ **ft.**

**Diameter of well casing** 53' of 6" & 200' of 4 **in.**

**I, HEREBY, CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.**

**Test performed by:** Robert Dawson Drilling & Pumps

**State License Number:** 732870

RESIDENTIAL BUILDING EXPAND SINGLE FAMILY

10/20/2005 07:38:15

# EL DORADO COUNTY BUILDING DEPARTMENT

PLACERVILLE 530-621-5315 EL DORADO HILLS 916-941-4967 OR 530-621-5582
SO LAKE TAHOE 530-573-3330 **INSPECTIONS** PLVL/EDH 530-621-5377 SLT 530-573-3330

## PERMIT: 163994 APN: 067-051-08-1

JOB ADDRESS: **3200 VERDE VALLE LN**
**DIRECTIONS:** EDH BLVD,RT ON GREENVALLEY,RT ON WEST GREEN SPRINGS,LFT AT Y TO VERDE VALLEY LN TO TOP OF HILL.

APPL DATE: 03/28/2005
ISSUE DATE: 10/20/2005
EXP DATE: 10/20/2007

APPLICANT: DIXON JOYCE D TR
APPL PHONE: (916) 933-5644
**NOTE:**

SETBACKS: F: LS: RS R: LOT SIZE: 20.000 COUNTY ROAD: NO

| SPECIFIC USE | TYPE | AREA | SPECIFIC USE | TYPE | AREA |
|---|---|---|---|---|---|
| COV PORCH | - | 46 | DECK | - | 308 |
| DWELLING | R3 V-N | 2,892 | | | |

| | INSPECTION | DATE | INSPECTOR | | INSPECTION | DATE | INSPECTOR |
|---|---|---|---|---|---|---|---|
| 1. | SITE REVIEW | 11/16/05 | JSV.9 | 45. | DIRECT VENTS | | |
| 2. | SETBACK | | | 46. | CHIMNEYS | | |
| *4. | FOOTINGS/FND | 12/1/05 | JSV.9 | 50. | HEAT STOVE/FP | | |
| 6. | CONC.BLK COMPLET | | | 51. | TYPE | | |
| 8. | TILT-UP PANELS | | | 52. | HVAC-UNIT | 12/5/06 | MBB |
| 9. | SLAB | 5/8/06 | MBB | 60. | FLOOR INSULATION | 6/20/06 | MBB |
| 10. | GIRDERS | | | 61. | WALL INSULATION | 6/20/06 | MBB |
| 14. | INT SHEAR/BR WAL | 5/2/06 | MBB | 62. | CEIL INSULATION | 6/20/06 | MBB |
| 15. | EXT SHEAR/BR WAL | 5/2/06 | MBB | 64. | MH TIE DOWNS | | |
| 16. | ROOF NAIL/DECK | 2/10/06 | MBB | 65. | MH SET-UP | 3/8/06 | MBB |
| 17. | FRAMING | 6/16/06 | MBB | 66. | SNOW LOAD | | |
| 18. | SHEETROCK | 6/22/06 | MBB | 67. | TEMPORARY POWER | ~~8/15/06~~ | ~~MBB~~ |
| 19. | FIREWALL | | | 68. | PERMANENT POWER | 8/22/06 | MBB 4SA |
| 20. | LATHING | | | 69. | GAS SER LP/NAT | | |
| 21. | STUCCO/SCRATCH | | | 70. | LP SNOW PROTECT | | |
| 23. | T-BAR CEILING | | | 73. | ROCK GRADE | | |
| 24. | WATER SUPPLY | | | 72. | ROUGH GRADE | | |
| 25. | SEWER | | | 71. | SUBGRADE | | |
| 26. | SLAB PLUMBING | ~~5/25/06~~ | MBB/MBB | 84. | PRE-GUNITE | | |
| 27. | UND FLR PLUMBING | 5/8/06 | MBB | 85. | DECK EQUIP BOND | | |
| (28). | TOPOUT PLUMBING | 6/20/06 | MBB | 88. | PRE-PLASTER | | |
| 29. | SHOWER PAN | 6/16/06 | MBB | 89. | POOL EQUIPMENT | | |
| 32. | INT GAS TEST | 5/8/06 | MBB | 218. | LIGHT SEALANT | | |
| 31. | EXT GAS TEST | | | 300. | ENERGY FORMS | | |
| 34. | WATER HEATER | | | 301. | AGENCY FORMS | | |
| 35. | GND ELECTRODE | | | 99. | HANDICAP | | |
| 36. | TYPE | | | 94. | SEPTIC SYSTEM | | |
| 37. | UND GROUND ELECT | | | 95. | EID FINAL | | |
| 38. | GFI/ARC FAULT | 10/5/06 | M | 96. | ENCROACHMT FINAL | | |
| (39). | ROUGH ELECT | 6/20/06 | MBB | 97. | DRIVEWAY FINAL | | |
| 40. | MAIN PANEL | 10/5/06 | MBB | 98. | GRADING FINAL | | |
| 41. | SUB PANEL | | | 102. | PERMIT FINAL | 10/5/06 | MBB |
| 42. | UND FLR DUCTS | | | | | | |
| 43. | DUCTWORK | 6/16/06 | MBB | | | | |
| 44. | GAS FLUES | | | | | | |

* SEE back FOOTING @ WINDOW WELLS

FOR BUILDING PERMITS

ROLE OF THE PROPERTY OWNER: The owner of the property is responsible for the completeness of the plans and conformance to construction code standards. A Contractor is an agent for the property owner and, as such, has the authority to make changes to the project.

ROLE OF THE BUILDING SERVICES: The plan review and inspection process of Building Services is designed to achieve substantial compliance with the California Building Code. This code is a minimum construction standard.

GENERAL INFORMATION: Issuance of a permit or prior inspection approval based on plans and/or other submitted data does not preclude the Building Official from requiring the correction of errors that may be contained in these documents (2001 California Building Code Section 106.4.3). You are entitled to reimbursement of permit fees if Building Services fails to conduct an inspection of the permitted work within 60 days of receiving notice the work is completed (California Health & Safety Code Section 17951).

Generally, a permit is valid for 2 years (3 years in the Tahoe basin) and is renewable with progress shown. Since the California Building Code prohibits occupancy or use of a structure prior to final inspection approval, renewal of a permit for a separate structure requires a signed statement that the structure is neither being occupied nor used.

ADDITIONAL REMARKS: Permit # 163994

11-17-05 Footing - 6'6" DEEP Footing/Wall (Footing Only) OK/JSU

12-1-05 Footing

2.3.06 SHEAR NOT READY

2.10.06 EXT SHEAR

3.3.06 FOOTING

3.8.06 SLAB

3.22.06 SLAB

5.2.06 SHEAR

5.25.06 SLAB PLMB

6.16.06 FRAME

6.20.06 INSULATION

6.23.06 ROCK, LATH, GAS

8.22.06 POWER

10.5.06 FINAL

# EL DORADO COUNTY BUILDING DEPARTMENT - PERMIT APPLICATION www.co.el-dorado.ca.us/building

## APPLICANT TO COMPLETE

ASSESSOR'S PARCEL NUMBER: 067-051-08-100

SITE ADDRESS: 3200 Verde Valle Ln Lot #: _____

OWNER'S NAME: Joyce Dixon

Mailing address: P.O. Box 887

City: Folsom State: CA Zip: 95763

Phone: (916) 933-5644 FAX: (916) 933-5644

APPLICANT'S NAME: (Print) Joyce Dixon

E-MAIL ADDRESS: _____

CONTRACTOR'S NAME: _____

Mailing address: _____

City: _____ State: _____ Zip: _____

Phone: (_____) _____ FAX: (_____) _____

Business Lic.#: _____ County ☐ SLT ☐ Placerville

State Cont. Lic. # and class: _____ Exp date: _____

ENGINEER: _____ Lic #: _____

ARCHITECT: _____ Lic #: _____

# of Bedrooms: 1 (Existing) 3 (New)

Second Dwelling: (yes) (no)

Public Water: (yes) (no)

Public Sewer: (yes) (no)

Septic: (yes) (no)

Heat Type: (gas) (oil) (electric) (wood) (solar) (other)

Map Page: _____

DESCRIPTION OF WORK/ COMMENTS: _____

Addition
2829
Deck
353.6

Valuation of Job (Cost): _____

## OFFICE USE ONLY

163994

APPLICATION NUMBER

APPLICATION DATE: RECEIVED

REC'D BY: _____

APPLICANT PREFERS RESPONSE BY: BUILDING DEPARTMENT

☐ PHONE ☐ FAX ☐ E-MAIL

COMMENTS: _____

Orig ho sign
1,262

§19825 of the Health and Safety Code requires that the following declarations be included as part of a Building Permit.

**NOTE: MORE THAN ONE SIGNATURE MAY BE REQUIRED * * ***

**OWNER-BUILDER DECLARATION:** I hereby affirm under penalty of perjury that I am exempt from the Contractor's License Law for the following reason: *(§7031.5 Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractor's License Law (Chapter 9, commencing with §7000 of Division 3 of the Business and Professions Code) or that he or she is exempt there from and the basis for the alleged exemption. Any violation of §7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred ($500) dollars)* **(check one):**

☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale *(§7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself or through his or her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale).*

☑ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (§7044, Business and Professions Code: *The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License Law).*

☐ I am exempt under Section _____, Business and Professions Code for this reason:

Owner's signature: Joyce Dixon Date: 3/28/05 CDL/ID#: _____ Exp date: _____

**LICENSED CONTRACTOR'S DECLARATION:** I hereby affirm that I am licensed under provisions of Chapter 9, commencing with §7000) of Division 3 of the Business and Professions Code and my license is in full force and effect.

Contractor's signature (if none, state NONE): _____ Lic #/Class: _____ Exp date: _____

**WORKERS' COMPENSATION DECLARATION:** I hereby affirm under penalty of perjury one of the following declarations **(check one):**

☐ I have and will maintain a certificate of consent to self-insure for workers' compensation, as provided by §3700 of the Labor Code, for the performance of the work for which this permit is issued.

☐ I certify that in the performance of the work for which this permit is issued, I shall not employ any persons in any manner so as to become subject to the workers' compensation laws of California, and agree that if I should become subject to the workers' compensation provisions of §3700 of the Labor Code, I shall forthwith comply with those provisions.

☐ I have and will maintain workers' compensation insurance, as required by §3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are: *(This section need not be completed if the permit is for one hundred ($100) dollars or less)*

Insurance company: _____ Exp date: _____ Policy No: _____

Applicant's signature: Joyce Dixon

**WARNING:** FAILURE TO SECURE WORKER'S COMPENSATION COVERAGE IS UNLAWFUL, AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS ($100,000), IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN §3706 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.

**CONSTRUCTION LENDING AGENCY:** I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (§3097 Civil Code).

Lender's name and address: (if none, state NONE): _____

**I certify that I have read this application and state that the above information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction, and hereby authorize representatives of this county to enter upon the above-mentioned property for inspection purposes. I REALIZE THAT APPLICATIONS FOR PERMITS BECOME NULL AND VOID 365 DAYS FROM APPLICATION DATE IF THE PERMIT IS NOT ISSUED.**

Applicant or agent's signature: Joyce Dixon Date: _____

***PLEASE NOTE:*** **ALL INFORMATION PROVIDED ON THIS FORM IS "PUBLIC RECORD" AND AVAILABLE TO THE PUBLIC UPON REQUEST**

Rev 11/5/03

# DEED RESTRICTION CERTIFICATE
## El DORADO COUNTY

Assessor's Parcel Number: 67-051-08 Application # _____

**The undersigned declares that he/she has read and understands the deed restrictions/CC&Rs applicable to the subject property, and that the improvement herein applied for does not violate any such restrictions. I also certify that I have submitted plans to the Architectural Control Committee (ACC) or to the local homeowners association, where required by said CC&Rs or deed restrictions, and have obtained approval for said improvement.**

DATED: 3/28/03 SIGNED: Joyce Dixon

PRINT NAME: Joyce Dixon

This declaration is required by the El Dorado County Code, Title 15.16.120 section 303(a)3 to verify that all property restrictions have been acknowledged prior to the issuance of a building permit.

Restrictions on your property may include easements for public or private access, utilities, drainage, or a road to other properties. Other restrictions may be from a homeowners association or a Community Services District with rules or regulations that govern your construction. Your property may be subject to one or more of these types of restrictions.

In requiring this document, the County assumes no responsibility for verifying the owner's compliance, nor does the county assume any responsibility for enforcement of any private deed restrictions.

The signature on the certificate is required even if there are no restrictions affecting your property.

COUNTY OF
EL DORADO

DEVELOPMENT SERVICES DEPARTMENT
www.co.el-dorado.ca.us/devservices


**PLACERVILLE OFFICE:**
2850 FAIRLANE COURT
PLACERVILLE, CA 95667
(530) 621-5775
(530) 622-1708 Fax
Counter Hours: 7:30 AM to 4:30PM
bldgdept@co.el-dorado.ca.us
planning@co.el-dorado.ca.us

**LAKE TAHOE OFFICE:**
3368 LAKE TAHOE BLVD
SUITE 302
SOUTH LAKE TAHOE, CA 96150
(530) 573-3330 & 542-9082 Fax
Counter Hours: 8-12 PM & 1-4 PM
tahoebuild@co.el-dorado.ca.us

**EL DORADO HILLS OFFICE:**
4950 HILLSDALE CIRCLE, SUITE 100
EL DORADO HILLS, CA 95762
(916) 941-4967 & (530) 621-5582
(916) 941-0269 Fax
Counter Hours: 7:30-12 PM & 1-4 PM
bldgdept@co.el-dorado.ca.us
planning@co.el-dorado.ca.us


# GENERAL PLAN CONSISTENCY REVIEW PROCESS FOR BUILDING AND GRADING PERMITS

On March 29, 2005 the Board of Supervisors adopted Ordinance No. 4666 establishing an interim General Plan Consistency Review process for building and grading permits. This ordinance applies to all new construction of 120 square feet of floor area, including additions, and to development activities that require a grading permit. The purpose of this review process is to ensure that ministerial development (i.e. building permits) are consistent with the general plan as required by Policy 2.2.5.20. The interim process will remain in effect until various actions and/or ordinances necessary to implement the General Plan are completed by the County.

The attached checklist is a supplement to the Building Permit application to provide sufficient data for Development Services staff to confirm that the proposed project is consistent with the general plan as required by this interim General Plan Consistency Review process.

This review requirement applies to all permit applications submitted after March 15, 2005 with the following exceptions:

- Discretionary permit applications (i.e. special use permits, variances, tentative maps, etc.) for which a finding of consistency with the General Plan is required regardless of the new ordinance; and
- Permits issued in accordance with an approved development agreement.

If a project is found to be inconsistent with an adopted policy as a result of the review process, the project should be revised to ensure consistency. If that is not possible, due to unique features of the site, the project may be reviewed as a discretionary project, subject to environmental review pursuant to the California Environmental Quality Act (CEQA), with mitigation measures applied to reduce the impact associated with the inconsistency. This will typically require the completion of an initial study and preparation of a mitigated negative declaration by the County.

This checklist will be revised from time to time in order to add newly adopted standards, or to provide greater clarity to the requested information. In addition, as the information becomes available, the checklist will be modified to include a list of resources, including web site locations, to facilitate the completion of the checklist. Data/maps to assist in completion of the checklist are also available at the Development Services Department offices. If you have any questions or need additional information contact Planning at (530) 621-5355 or at planning@co.el-dorado.ca.us.


RECEIVED
APR 08 2005
EL DORADO COUNTY
BUILDING DEPARTMENT
163994

## GENERAL PLAN CONSISTENCY CHECKLIST
## SINGLE-FAMILY RESIDENTIAL PROJECTS & ACCESSORY STRUCTURES

Implementing Policy (2.2.5.20):

*Development involving any structure greater than 120 square feet in size or requiring a grading permit shall be permitted only upon a finding that the development is consistent with this General Plan and the requirements of all applicable County ordinances, policies, and regulations. For projects that do not require approval of the Planning Commission or Board of Supervisors, this requirement shall be satisfied by information supplied by the applicant demonstrating compliance.*

**BASIC INFORMATION**

**Permit Number(s):** 067-051-08

**APN(s):** 163994

**Applicant/Owner:** Joyce Dixon
*(name, address, phone and/or email)* P.O. Box 887 Folsom CA 95763 OR 3200 Verde Valle Ln El Dorado Hills CA 95762

**Agent (if applicable):** NONE
*(name, address, phone and/or email)*

*Note: Much of the following information can be found on the County's website at: www.co.el-dorado.ca.us/planning/ParcelData/EnterAPN.aspx. You will need to enter the assessor's parcel number to access the appropriate data.*

**Designations:** General Plan Land Use LDR Zoning AE

**Planning Area**

- [x] Community Region (name) EDA
- [ ] Rural Center (name)
- [ ] Rural Region (any area other than a Community Region or Rural Center)

*I affirm that the information contained in this application is true and correct to the best of my knowledge and any material misinformation in this application can result in the denial or revocation of my permit(s).*

**Signature** Joyce Dixon *(Owner or Authorized Representative)* **Date** 4/8/05

## 1. Impervious Surface Percentage (Policy 2.2.1.5)

**Requirement:**
The General Plan requires that all projects conform to the following standard for maximum impervious surfaces:

| Land Use Designation | Maximum Impervious Surface in Percent* |
|---|---|
| High Density Residential | 75 |
| Medium Density Residential | 60 |
| Low Density Residential | 10 |
| Rural Residential | 10 |

*"Impervious" means incapable of being penetrated.*
*"Pervious" means open to passage or that which can be penetrated.*
*Note that in all cases, the ability of an object to allow the passage of water is the critical factor in determining whether it is considered "impervious" or "pervious."*

**Calculation:**

1. Total the square footage for all impervious surfaces: all structures, including garages, patios, sheds, decks, swimming pools, and all pavement. Any pervious concrete is not included. Total Square Footage = [redacted] 4398

2. Divide the total square footage of impervious surfaces (calculated in #1) by the total square footage of the parcel (acreage multiplied by 43,560) = 0.01

4

3. Multiply by 100 = Impervious Surface Percentage = 1 %

***If the Impervious Surface Percentage exceeds the maximum listed above, your project cannot be approved without modification(s).***

## 2. Solid Waste and Recycling Facilities (Policy 5.5.2.2)

Is the parcel **located within 0.25 mile (1320 feet)** of any landfill sites or material recovery facilities? (See map at the Development Services Department public counter. Development Services will make this information available on-line in the near future.)

Check one:

- ☐ Yes*
- ☒ No

***If you have checked "Yes", a disclosure statement indicating that you are aware of the facility's location is required prior to Building Permit issuance for the project. The form may be obtained at the Development Services Department public counter. The Development Services Department will establish a link to this form in the near future.**

## 3. Scenic Corridors (Policy 2.6.1.2)

Is the project site **located adjacent to** one of the following identified State Officially Designated Scenic Corridors?

- U.S. Highway 50 from Placerville to Echo Summit (Post Miles 16.8 to 74.4); or
- State Highway 89 (Post Miles 0.0 to 27.4). (See the map at the Building Services Department public counter. The Development Services Department will make this map available on-line in the near future.)

Check one:

☐ Yes*
☒ No

***If you have checked "Yes", your project must place any new utilities underground; no new overhead utility poles are permitted.**

## 4. Asbestos (Policy 6.3.1.1)

Will the project **result** in any earth disturbance **within an area** that is likely to contain naturally occurring asbestos as mapped by the California Department of Conservation? (See map at http://www.co.el-dorado.ca.us//emd/apcd/NOA_map.html or at the Development Services Department public counter.) *Please note that the map information is at a scale that may not describe all potential sites where asbestos may be present.*

Check one:

☐ Yes*
☒ No

***If you have checked "Yes" you must have a California-registered geologist inspect the project area for the presence of asbestos using appropriate test methods and submit a copy the report to the Air Quality Management District (AQMD). If the presence of asbestos is indicated, warning signs must be posted at the work/construction site and compliance with El Dorado County Environmental Management and AQMD fugitive dust prevention and contingent asbestos dust mitigation plan requirements will be required during grading and construction.**

## 5. Hazardous Materials (Policy 6.6.1.2)

Will the project **result in any earth disturbance within an area** known to be or suspected to be contaminated by hazardous materials. (See the parcel list at the Development Services Department public counter. The Development Services Department will make this information available on-line in the near future.)

Check one:

☐ Yes*
☒ No

***If you have checked "Yes" you must have a site investigation prepared by a Registered Environmental Assessor or other person experienced in identifying hazardous wastes and submit the report to the El Dorado County Environmental Management Department.**

**If contamination is found to exist, it must be corrected and remediated in compliance with applicable laws, regulations, and standards prior to the issuance of any permit.**

## 6. Aviation Noise and Hazards (Policies 2.2.5.13, TC-7a, 6.5.2.1, 6.8.1.1)

Is the project located within the area **covered by an airport Comprehensive Land Use Plan** (CLUP)? (See the map located at the Planning Department public counter. The Planning Department will make this information available on-line in the near future.)
If yes*, check one and indicate which safety zone your property is located:

- ☐ Placerville: Safety Area _____
- ☐ Cameron Park: Safety Area _____
- ☐ Georgetown: Safety Area _____
- ☐ South Lake Tahoe: Safety Area _____

***If you have checked that your project is in an area covered by one of the airport CLUPs, it may be subject to density limitations or limitations on the maximum height of structures. The CLUP's are not presently available on-line. You may view a hard copy at the Development Services Department public counter or obtain additional information by calling the Development Services Department at (530) 621-5355.**

## 7. Soil Conservation (Policy 7.1.2.1)

Does the area of ground disturbance (may not be the entire parcel) contain slopes greater than 30%?

Check one:

- ☐ Yes*
- ☒ No

*Percent slope can be calculated by dividing the change in elevation by the horizontal distance, multiplied by 100.*

***If you have checked "Yes" you may need to modify the project to avoid areas containing greater than 30% slope (Note: Exceptions may be allowed for necessary access driveways, for public safety, for repairs to existing infrastructure or buildings, or if reasonable use of the property would otherwise be denied).**

## 8. Mineral Resources (Policy 7.2.2.3)

Is the parcel located **adjacent to an existing mining operation** and is the proposed use a **new, non-mining use** with the potential to restrict future mining (such as residential or other noise-sensitive uses)? (See the map at the Development Services Department public counter. The Development Services Department will make this information available on-line in the near future.)

Check one:

- ☐ Yes*
- ☒ No

***If you have checked "Yes," you must sign a disclosure statement indicating that you are aware of the location of the mining operation. The form may be obtained at the Development Services Department public counter. The Development Services Department will establish a link to this form in the near future.**

## 9. Conservation of Water Resources (Policies 7.3.3.4, 7.3.3.5, 7.3.4.2, 7.4.2.5, 5.4.1.2)

**Requirement:** General Plan policy requires the following setbacks from water features (for all development, including structures, infrastructure, or any ground disturbance but excluding road and bridge repair or construction, trail construction or any recreational access structure, such as docks and piers):

| Water Feature | Setback Requirement |
|---|---|
| Perennial Stream or River | 100 feet from top of bank |
| Lake | 100 feet from top of bank or water's edge |
| Intermittent Stream | 50 feet from top of bank |
| Wetland | 50 feet from water's edge or location of wetland plants |

Does your project site contain any of the above water features within 125 feet of the proposed area of disturbance/construction?

Check one:

- ☐ Yes
- ☒ No

***If you have checked "Yes" then your project may be subject to the setback requirements required by the General Plan policies listed above. Your project plans will need to show the distance between the proposed area of disturbance and any water feature. A planner is available to assist you in determining the applicable setback for your project. In some cases a site visit by the planner may also be necessary.**

## 10. Forest and Woodland Resources (Policies 7.4.4.4, 7.4.4.5)

**Requirement:** General Plan policy requires the retention of tree canopy as listed in the following table:

| Percent Existing Canopy Cover | Canopy Cover to be Retained |
|---|---|
| 80-100 | 60% of existing canopy |
| 60-79 | 70% of existing canopy |
| 40-59 | 80% of existing canopy |
| 20-39 | 85% of existing canopy |
| 10-19 | 90% of existing canopy |
| 1-9** | 90% of existing canopy |

**Note that if the existing canopy cover is between one and nine percent, the retention of canopy only applies to parcels greater than one acre in size.

J 6171 - I

AMENDED PLAT OF:

# FRANCISCO OAKS

A PORTION OF THE E. 1/2 OF SECTION 22, T.10 N., R.8 E., M.D.M.
BEING LOTS 1 THRU. 82 and LOT A of FRANCISCO OAKS, FILED in Bk. 'I', Pg. 8
and LOT 'D' of CROWN VALLEY UNIT NO. 1 AMENDING MAP, FILED in Bk. 'I', Pg. 44

COUNTY OF EL DORADO STATE OF CALIFORNIA

MARCH, 2002 SCALE: 1'=40'

COOPER, THORNE & ASSOCIATES, INC.

SHEET 7 OF 10

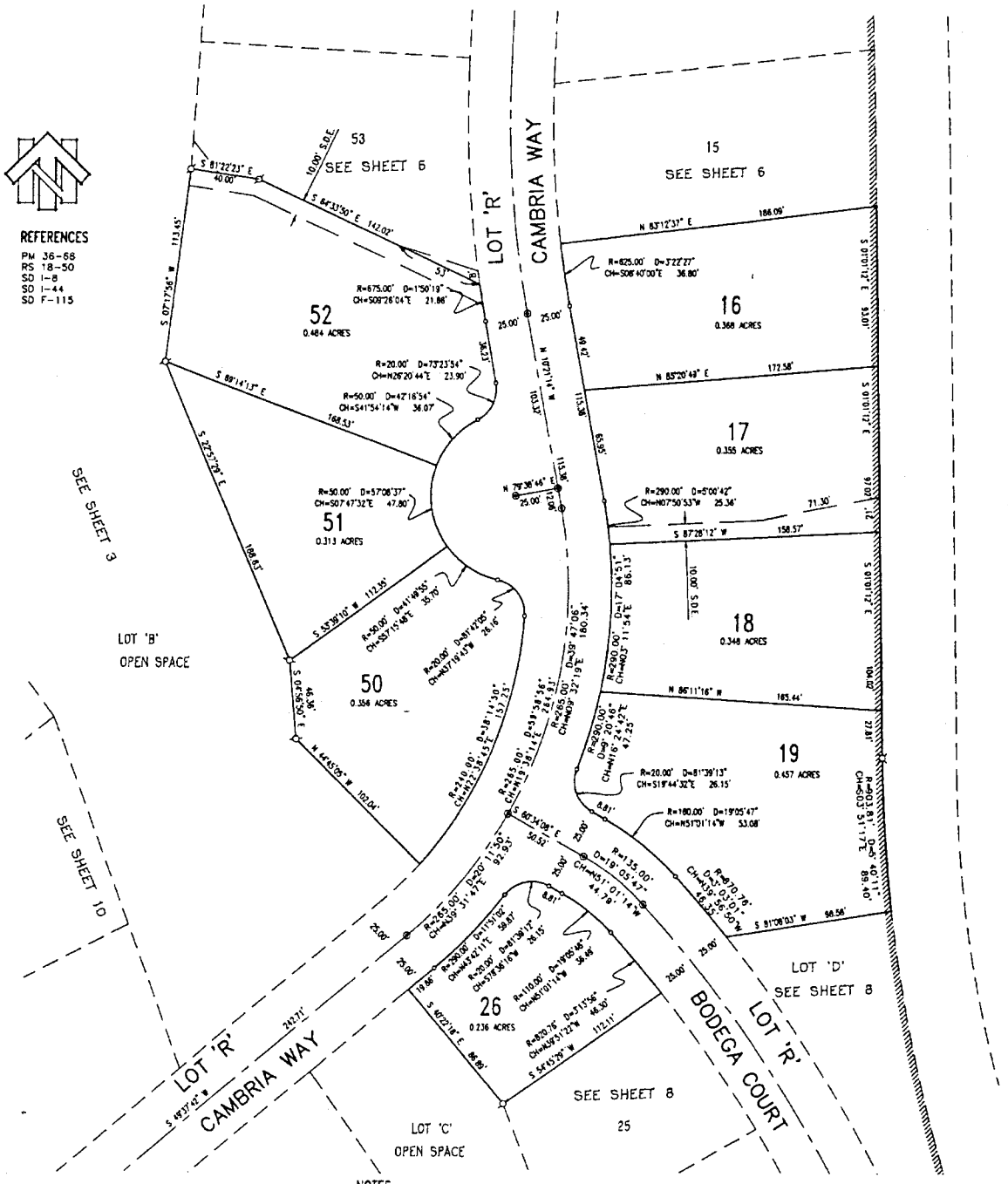
J 6171 - I

LEGEND

| | |
|---|---|
| o | DIMENSION POINT |
| ● | FOUND MONUMENT AS NOTED |
| ◪ | FOUND 3/4" I.P. PER F-115 |
| ▣ | FOUND 1 1/2" I.P. AS NOTED |
| ⊙ | SET SURVEY SPIKE AND WASHER STAMPED LS 4898 |
| ⊘ | SET 3/4" C.I.P. STAMPED LS 4898 |
| ⌑ | SET 1 1/2" C.I.P. STAMPED LS 4898 |
| S.D.E. | STORM DRAIN EASEMENT |
| S.S.E. | SANITARY SEWER EASEMENT |
| //// | NO INGRESS/EGRESS RIGHTS LINE |

REFERENCES

PM 36-68
RS 18-50
SD I-8
SD I-44
SD F-115




NOTES

1. ALL DISTANCES ON CURVED LINES ARE CHORD DISTANCES UNLESS NOTED OTHERWISE.

2. ALL ANGLE POINTS COMMON TO REAR LOT CORNERS ARE MARKED BY A 3/4" C.I.P. STAMPED "L.S.4898". ALL REMAINING REAR LOT CORNERS ARE MARKED BY A 5/8" REBAR WITH CAP STAMPED "L.S.4898"

3. ALL FRONT LOT CORNERS ARE MARKED BY A SLASH IN TOP BACK OF CURB AT THE PROPERTY LINE EXTENDED.

4. THE AREA CONTAINED WITHIN THIS SUBDIVISION IS 40.602 ACRES CONSISTS OF 67 RESIDENTIAL LOTS AND 6 MISCELLANEOUS LOTS.

5. PURSUANT TO SECTION 66499.20½ OF THE SUBDIVISION MAP ACT, LOTS 1 THROUGH 82 AND LOT A, DESIGNATED REMAINDER AND THE DEDICATED PUBLIC STREETS AND PUBLIC EASEMENTS OF FRANCISCO OAKS, FILED IN BK. I, PAGE 8 AND LOT D OF CROWN VALLEY UNIT NO. 1 AMENDING MAP FILED IN BK. I, PAGE 44 AND ARE HEREBY MERGED AND RESUBDIVIDED AND DOES ALSO CONSTITUTE THE ABANDONMENT OF ALL PUBLIC STREETS AND PUBLIC EASEMENTS SHOWN AND OFFERED FOR DEDICATION THEREON.

6. LOTS 'B','C','D', & 'E' SHOWN HEREON ARE RESERVED FOR FUTURE DEDICATION AS OPEN SPACE.

7. LOT 'R' SHOWN HEREON IS DESGNATED AS PRIVATE STREETS AND PUBLIC UTILITY EASEMENTS FOR THE BENEFIT AND GENERAL USE OF THE RESIDENTIAL LOTS ALSO SHOWN HEREON.

J 6171 - I

BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS SURVEY IS IDENTICAL WITH THAT OF "FRANCISCO OAKS", S.D. I-8, AND IS BASED UPON MONUMENTS SHOWN AS FOUND HEREON.

I-149F

COUNTY OF
**EL DORADO**

# BUILDING DEPARTMENT


**PLACERVILLE OFFICE:**
2850 FAIRLANE COURT
PLACERVILLE, CA 95667
(530) 621-5 5
(530) 622- )8 Fax
Counter H s: 8 AM to 3 PM
bldgdept@c el-dorado.ca.us

**LAKE TAHOE OFFICE:**
3368 LAKE TAHOE BLVD.
SUITE 302
SOUTH LAKE TAHOE, CA 96150
(530) 573-3330 Fax 542-9082
Counter Hours: 8-12 AM & 1-4 PM
tahoebuild@co.el-dorado.ca.us


This certificate must be completed and returned to the inspector at the time of, or prior to, a final inspection.

## SMOKE DETECTOR INSTALLATION CERTIFICATE

Address: 3200 VERDE VALLY Permit # 163994

Assessor's Parcel # 067 051 08

Section 310.9.1.2 of the Uniform Building Code states, "When the valuation of an addition, alteration or repair to a Group R Occupancy exceeds $1,000 and a permit is required, or when one or more sleeping rooms are added or created in existing Group R Occupancies,...", smoke detectors shall be installed throughout the existing house in accordance with current code provisions.

Smoke detectors shall be installed in bedroom hallways, in each bedroom, on each story including basements, in close proximity to stairways and on ceilings open to bedroom hallways if they are higher than 2 feet above the hallway height. These added detectors may be battery operated.

EXCEPTION: Repairs to the exterior surfaces of a Group R Occupancy are exempt from the requirements of this section.

Our inspector does not need to enter the dwelling to verify that these detectors have been installed if you, the property owner, certify in writing that the detectors have been installed.

***"I, as property owner at the above address, certify that smoke detectors have been installed in this residence in accordance with the Uniform Building Code as outlined above."***

Signature _____ Date 10-5-06

**IF YOU HAVE ANY QUESTIONS REGARDING THIS CERTIFICATE, PLEASE CONTACT YOUR INSPECTOR OR THE BUILDING DEPARTMENT.**

163994

Revised 3/00

SCAN

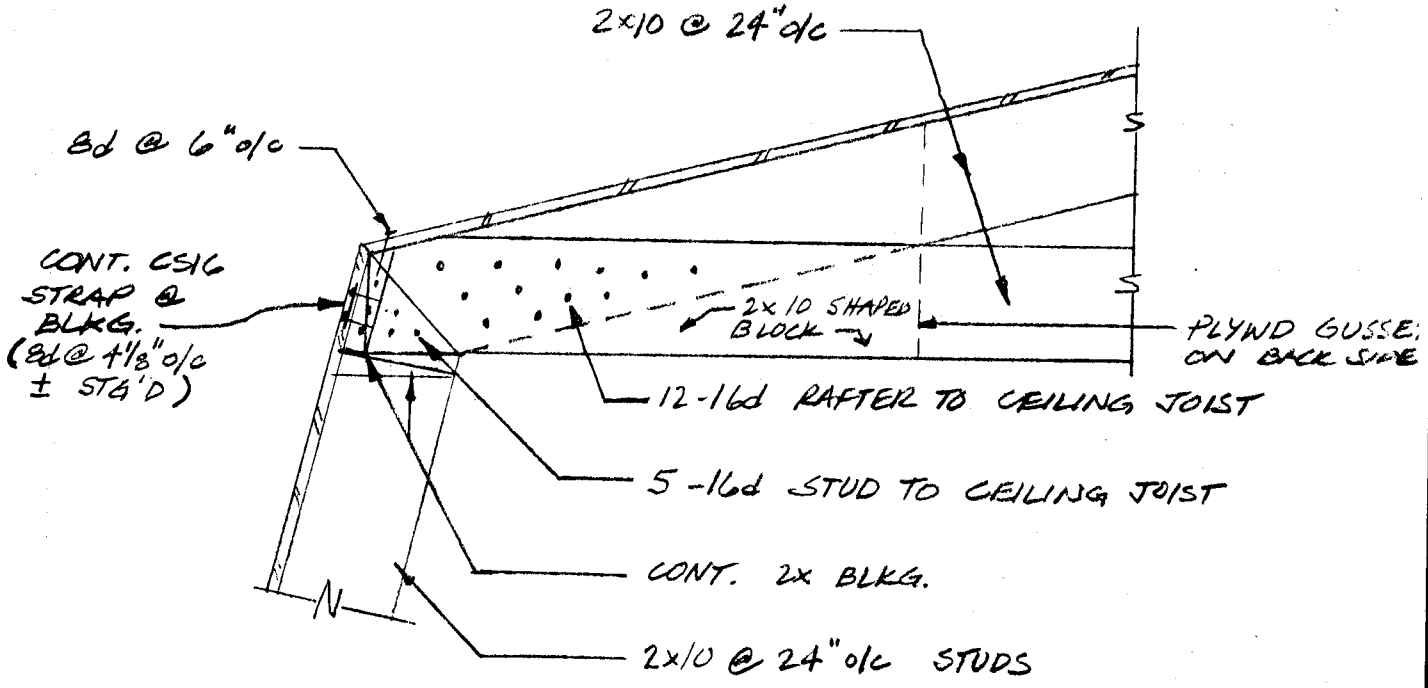
CLIENT DIXON DATE 2-13-06 BY BJB PROJECT NO. BB-207

PROJECT FRAMING DETAIL SHEET 2 OF 2

LOCATION REV.

**Bailey & Assoc.** *Structural Engineers*

*P.O. Box 305 • Garden Valley, CA 95633 • (916) 333-1444*

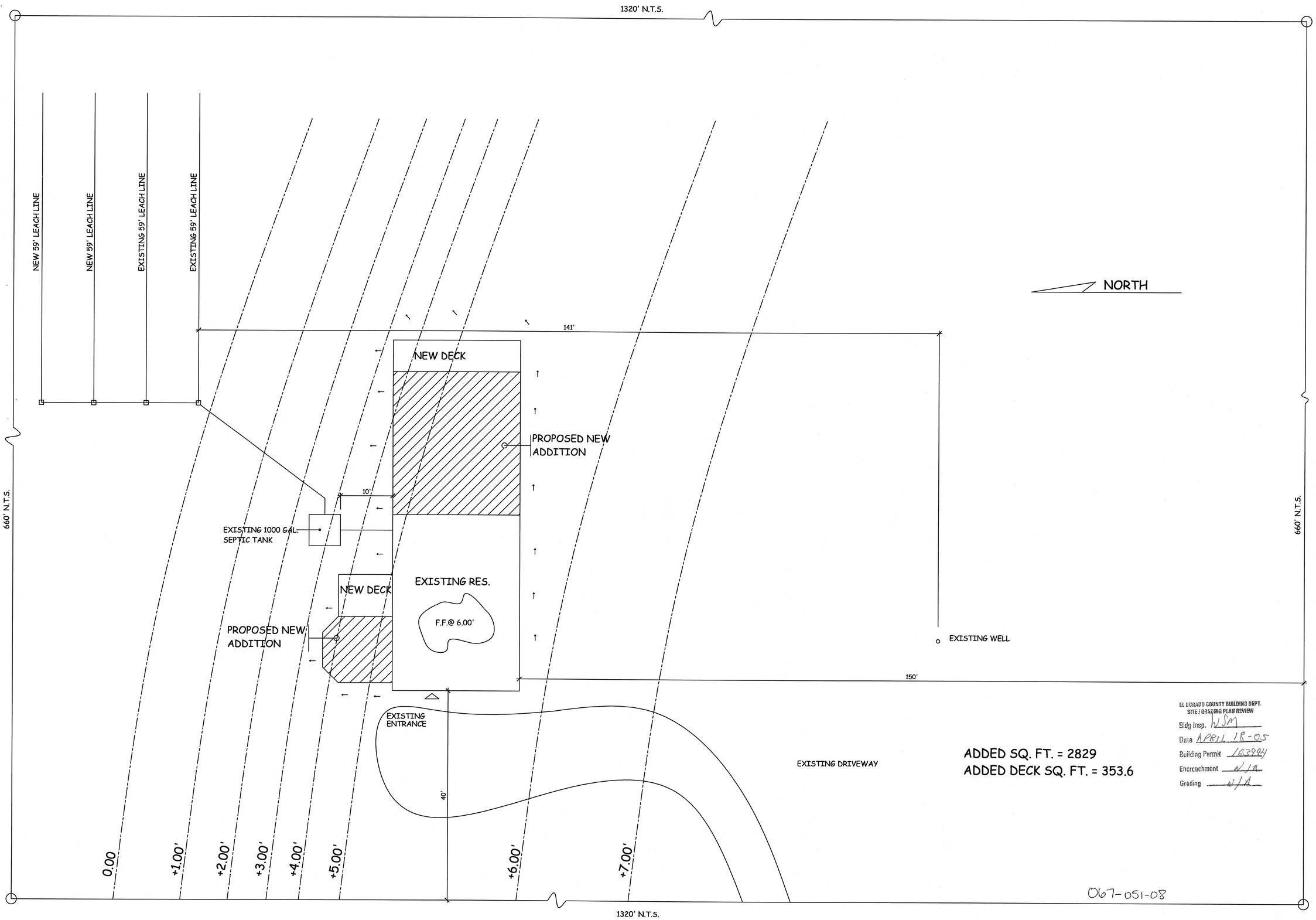



GAMBREL ROOF FRAMING

1" = 1'-0"

163994

SCAN




ADDED SQ. FT. = 2829
ADDED DECK SQ. FT. = 353.6

EL DORADO COUNTY BUILDING DEPT.
SITE / GRADING PLAN REVIEW
Bldg Insp. WJM
Date APRIL 18-05
Building Permit 163994
Encroachment N/A
Grading N/A

067-051-08

MONARCH
DRAFTING DESIGNS AND CONSTRUCTION
3216 NAOMI WAY
PLACERVILLE CA,
95667
(530) 295-0778
monarchdd@sbcglobal.net
LIC# 816340

A MEMBER OF AIA
THE AMERICAN INSTITUTE OF ARCHITECTS

AND A LICENSED CALIF. GENERAL CONTRACTOR
LICENSE NO: 816340

A New Addition Plan
For Mrs. Joyce Dixon
3200 Verde Valley Ln.
El Dorado Hills
(916) 933-5644
A.P.N. # 67-051-08

PLOT PLAN

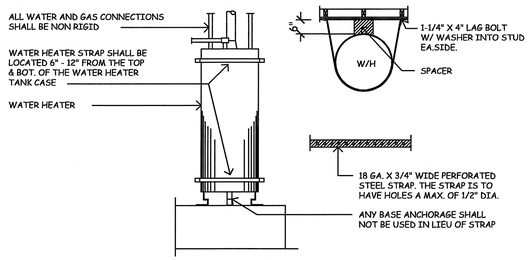
Brad Dick : Principle

Engineer

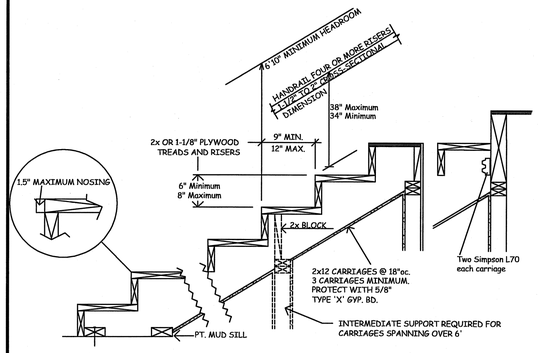
REVISIONS
5/12/05

| SCALE | DATE |
|---|---|
| 1/8" | 15/05 |
| SQ.FT. 2829 | DRAWN BY B.D. |
| | CHECKED BY |
| JOB NO. Dixon | |

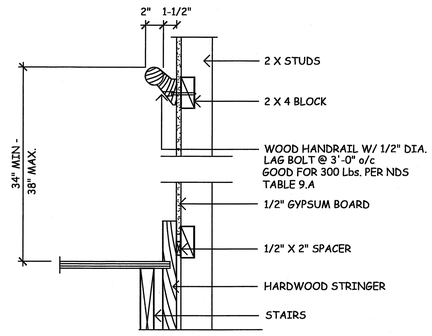
P-1




A Seismic Straps — Scale 1-1/2" = 1'




B STAIR DETAIL — Scale 3/4"=1'-0"




C Handrail Detail — Scale 1-1/2" = 1'

## Floor Plan Keynotes

AS INDICATED ON PLANS BY (◇7)

1. CERAMIC TILES ON COUNTER AND SPLASH.
2. DISHWASHER.
3. DOUBLE SINK WITH DISPOSAL.
4. LINE OF UPPER CABINET.
5. COOK TOP. HOOD FAN AND LIGHTABOVE.
6. COOK TOP WITH OVEN BELOW AND MICROWAVE HOOD
7. REFRIGERATOR WITH TEE FOR ICE MAKER.
8. SALAD SINK (N/A)
9. 'HEAT-N-GLO ' '0' CLEARANCE DIRECT VENT FIREPLACE MODEL SL-350DVT . TESTED BY UNDERIGHTERS LABORATORIES. INSTALL PER MANUFACTURERS SPECIFICATIONS. ALL UNITS SHALL BE LISTED APPLIANCES. (N/A)
10. NON COMBUSTABLE HEARTH, MUST EXTEND A MINIMUM OF 20" FROM FACE OF FIREPLACE (N/A)
11. PANTRY
12. FULL LENGTH JOB MEASURED MIRROR.
13. INSTALL TUB AND O.H. SHOWER WITH CERAMIC TILE TO 72" ABOVE DRAIN INLET OVER AN APPROVED WATER RESISTANT TILE BACKING. INSTALL SHOWER HEAD.
14. INSTALL HOT MOPPED TILE SHOWER PAN LINER. INSTALL CERAMIC TILE TO 72" ABOVE DRAIN INLET OVER APPROVED WATER RESISTANT TILE BACKING. INSTALL APPROVED SAFETY GLASS DOOR WITH A MINIMUM WIDTH OF 24". (N/A)
15. INSTALL JUCC TUB BY OTHERS TILE O/ WP. GYP. BD. UP MIN. 12"
16. LAUNDRY SINK
17. SINGLE SHELF AND ROD.
18. VANITY WITH TILES AND BACKSPLASH ON COUNTER.
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25. CONCRETE PORCH.
26. 2X6 DECKING WITH 36" HIGH GAURD RAILS
27. WET BAR (N/A)
28. ENTERTAINMENT CENTER (N/A)
29. FAU UNIT IN ATTICK
30. 45 GAL. WATER HEATER ONTOP OF 18" HIGH MIN. PLATFORM SHRK IN 5/8" TYPE X GYP. BOARD INSTALL 3" DIAMETER PIPE BY 36" HIGH IN FRONT IN 12X12 CONCRETE FOOTING
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## Window Schedule

[T] INDICATES REQUIRED TEMPERED GLAZING IN WINDOW.

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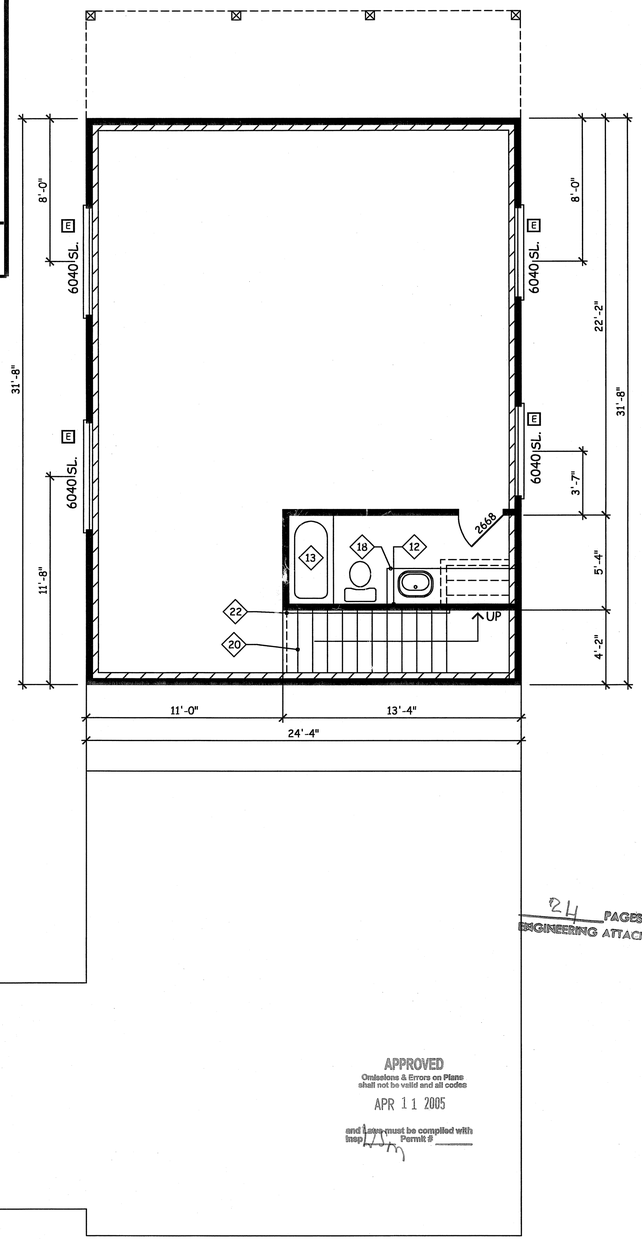
OFFICE COPY




24 PAGES OF ENGINEERING ATTACHED

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## Basement Floor

770 SQ. FT.

163994

MONARCH
DRAFTING DESIGNS AND CONSTRUCTION
3216 NAOMI WAY
PLACERVILLE CA, 95667
(530) 295-0778
monarchdd@sbcglobal.net
LIC# 816340

A MEMBER OF AIA
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LICENSE NO: 816340

A New Addition Plan
For Mrs. Joyce Dixon
3200 Verde Valley Ln.
El Dorado Hills
(916) 933-5644
A.P.N. # 67-051-08

Lower Floor Plan

Brad Dick : Principle

Engineer

REVISIONS

| SCALE | DATE |
|---|---|
| 1/4"=1' | 8/04 |
| SQ.FT. 2748 | DRAWN BY S.B. |
| | CHECKED BY |

JOB NO. Dixon

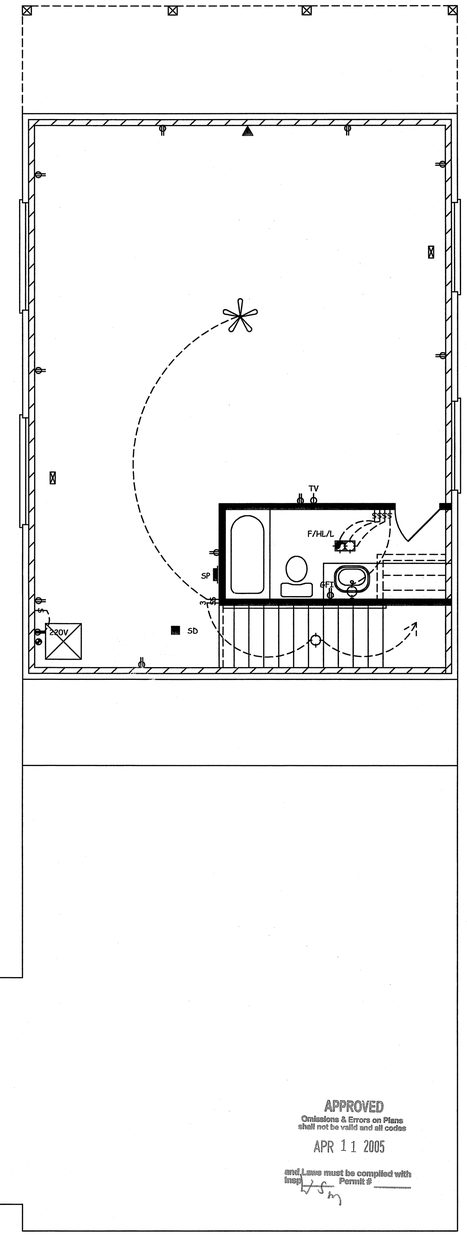
A-2

# Symbols Key

| | | | |
|---|---|---|---|
| | STANDARD DUPLEX OUTLET, 14" HIGH, TYP. U.N.O. | CH | CHIMES |
| GFI | DUPLEX OUTLET, GROUND FAULT INTERRUPT | SP | ELECTRICAL SUB-PANEL |
| WP/GFI | DUPLEX OUTLET, WATERPROOF GFI | | ELECTRICAL MAIN PANEL |
| 1/2 | DUPLEX OUTLET, SPLIT WIRED TO SWITCH | C.A.R. | WALL MOUNTED COLD AIR RETURN |
| 220V | 220 VOLT RECEPTACLE | | WALL MOUNTED HEAT REGISTER |
| | FOUR-PLEX OUTLET | | FLOOR HEAT REGISTER |
| 1/4 | FOUR-PLEX OUTLET, 1/4 WIRED TO SWITCH | | CEILING HEAT REGISTER |
| | STANDARD INCANDESCENT LIGHT FIXTURE | | STANDARD SWITCH |
| | WALL MOUNTED INCANDESCENT FIXTURE | 3 | 3-WAY SWITCH |
| SC | WALL MOUNTED INCANDESCENT SCONCE FIXTURE | 4 | 4-WAY SWITCH |
| A | LOW-VOLTAGE ADDRESS LIGHT | D | DIMMER SWITCH |
| | CAN LIGHT FIXTURE | | GAS COCK |
| | SPOTLIGHT FIXTURE | | GAS KEY |
| | MARINE LIGHT (LABELED SUITABLE FOR DAMP LOCATIONS) | T | THERMOSTAT |
| BS | BABY SPOTLIGHT FIXTURE | P | RECIRCULATING PUMP |
| F/L | FAN / LIGHT COMBINATION FIXTURE | | GAS LOG LIGHTER |
| F/HL | FAN / HEAT LAMP COMBINATION FIXTURE | | RADIO OPERATED, AUTOMATIC GARAGE DOOR OPENER |
| F/HL/L | FAN / HEAT LAMP / LIGHT COMBINATION FIXTURE | | COMBINATION WASHER & DRYER RECESSED HOOKUPS |
| | FAN | | SECURITY LIGHT |
| | FLUORESCENT LIGHT FIXTURE | V | CENTRAL VACUUM |
| | TELEPHONE JACK | | PLANTATION-STYLE PADDLE FAN/LIGHT |
| TV | CABLE / ANTENNA T.V. OUTLET | | |
| PB,DB | PUSH BUTTON / DOOR BELL | | |
| SD | SMOKE DETECTOR ON 110V LINE | | |

# Electrical and Mechanical Notes

1. PROVIDE BACKDRAFT DAMPERS AT VENTS AT LAUNDRY AND BATHS.
2. ALL INTERIOR BATHROOM FANS TO PROVIDE 5 AIR CHANGES PER HOUR.
3. INSTALL SEISMIC STRAPPING AT HVAC EQUIPMENT. SEE DETAIL 13/D.2.
4. INSTALL COMBUSTION AIR VENTS, WHEN APPLICABLE, IN ACCORDANCE WITH UMC SECTION 602, 603 AND UBC SECTION 302.
5. PLASTIC PIPING SHALL NOT BE USED WITIN FIRE WALLS.
6. INSTALL AUTOMATIC NIGHT SETBACK THERMOSTATS ON ALL HVAC EQUIPMENT.
7. PROVIDE 6" CLEARANCE ON COMBUSTION AIR SIDE OF FURNACE ROOM, 30" WORKING SPACE IN FRONT OF ALL HEATING CONTROLS PER UMC SECTIONS 604, 605, AND 703.
8. WHEN A WATER HEATER OR FURNACE IS LOCATED IN A ATTACHED GARAGE AND THERE IS A DOOR FROM THE GARAGE TO THE DWELLING, PROVIDE A MINIMUM OF 1 SQUARE INCH OUTSIDE COMBUSTION AIR PER 1000 B.T.U. WITH 1/2 HIGH AND 1/2 LOW VENTS FOR APPLIANCES.
9. GAS APPLIANCES LOCATED IN A GARAGE SHALL HAVE IGNITION DEVICES LOCATED NO CLOSER THAN 18" TO THE FLOOR.
10. VENTING OF APPLIANCES SHALL COMPLY WITH CHAPTER 9 UMC.
11. GAS PIPING SHALL NOT PASS UNDER OR THROUGH FOUNDATION OR BE EMBEDDED WITIN OR BELOW CONCRETE SLABS.
12. CONTRACTOR SHALL VERIFY WITH LOCAL UTILITY COMPANIES THE LOCATION OF ALL ON/OFF SITE UTILITY SERVICES.
13. SHOWERHEADS AND FAUCETS SHALL BE INSTALLED TO REDUCE WATER FLOW TO 3-1/2 GALLONS PER MINUTE.
14. WATER HEATERS INSTALLED WITHIN THE DWELLING SHALL HAVE PRESSURE RELIEF VALVE DRAINS TO THE EXTERIOR, OR A CATCH BASIN, 2" DEEP, INSTALLED UNDER APPLIANCE, OVER FLOOR.
15. ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NEC OR ANY ORDINANCES WHICH SUPERCEDE.
16. ALL RECEPTACLE BOXES LOCATED IN FIRE WALLS SHALL BE METAL.
17. SIZE THE MAIN ELECTRICAL SERVICE PANEL TO CARRY FUTURE LOADING.
18. ALL INTERIOR METALLIC WATER AND GAS PIPING WHICH MAY BECOME ENERGIZED SHALL BE BONDED TOGETHER AND MADE ELECTRICALLY CONTINUOUS.
19. INSTALL A SEPARATE 20 AMP LAUNDRY CIRCUIT.
20. CONTRACTOR SHALL LIMIT THE USE OF FLEXIBLE CONDUIT FOR GROUNDING.
21. MOUNTING HEIGHT OF ALL FIXTURES SHALL BE 14" ABOVE FLOOR, U.N.O..
22. FIXTURES INSTALLED FOR GENERAL LIGHTING IN KITCHES AND BATHROOMS SHALL GENERATE 40 LUMENS PER WATT, MINIMUM.
23. ALL ELECTRICAL OUTLETS IN THE GARAGE SHALL BE GFI OUTLETS MOUNTED AT LEAST 18" ABOVE THE SLAB, U.N.O..
24. PROVIDE TWO MINIMUM SEPARATE 20 AMP CIRCUITS FOR SMALL KITCHEN APPLIANCES.
25. EXCEPT CLOTHES WASHER ALL HOSE BIBS AND LAWN SPRINKLERS ARE TO HAVE APPROVED BACKFLOW PREVENTION DEVICES (2001 CPC 603)
26. ISOLATION FITTINGS INSTALLED 6" MIN. ABOVE GRADE TO ELECTRICALLY ISOLATE THE THE UNDER GROUND PIPE FROM THE REST OF THE GAS SYSTEM (2001 CPC 1211.7)
27. USE APPROVED ELECTRICAL BOXES FOR CEILING FANS
28. INCANDESCENT LIGHTS CAN NOT BE CLOSER THAN 12 in FROM THE NEAREST POINT OF A STORAGE AREA ON SHELF IN CLOSETS. (AS MEASURED FROM THE FRONT OF VERTICAL PLANE) OPEN OR PARTIALLY ENCLOSED INCANDESCENT FIXTURES SHALL NOT BE PERMITTED IN CLOSETS. (NEC 410-8)
29. SMOKE DETECTORS SHALL BE WIRED IN A SERIES, RECEIVE THERE PRIMARY POWER FROM THE BUILDING WIRING AUDIBLE IN ALL SLEEPING AREAS OF THE DWELLING.
30. LIGHTING IN THE BATH ROOMS AND KITCHEN SHALL HAVE AN EFFICIENCY OF AT LEAST 40 LUMENS PER WATT.

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# Basement Floor

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A New Addition Plan
For Mrs. Joyce Dixon
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El Dorado Hills
(916) 933-5644
A.P.N. # 67-051-08

Basement Electrical plan

Brad Dick : Principle

Engineer

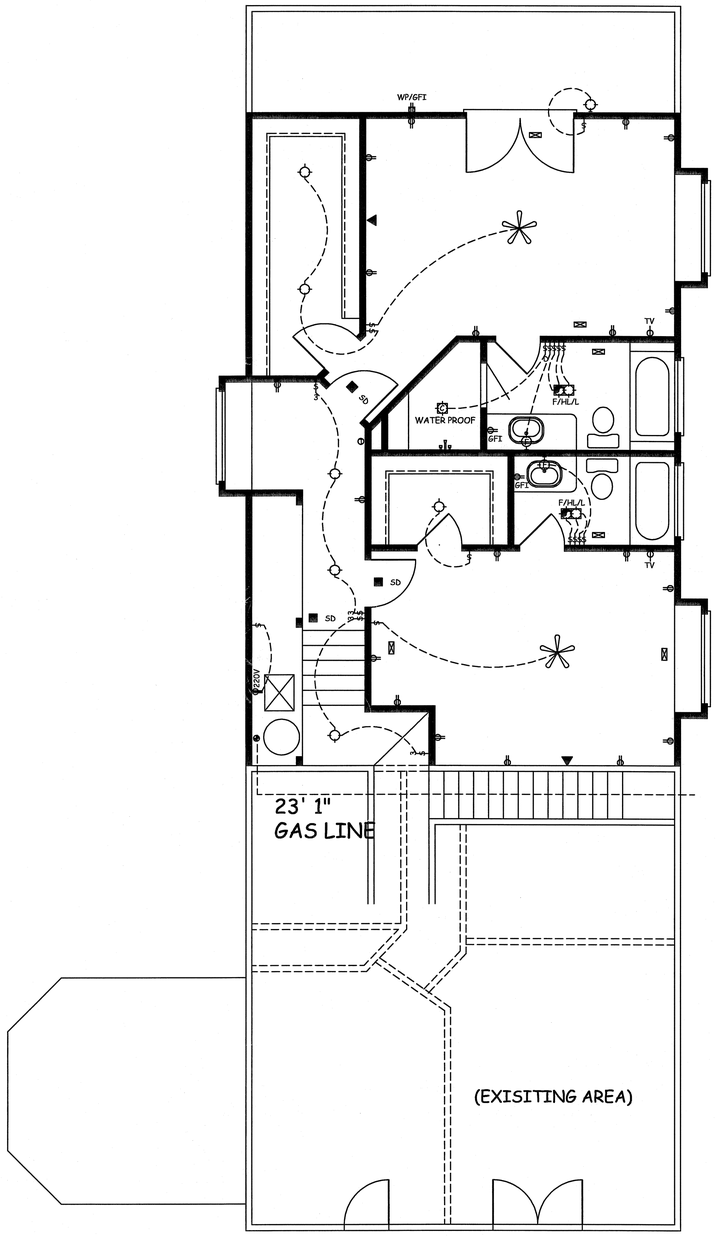
REVISIONS

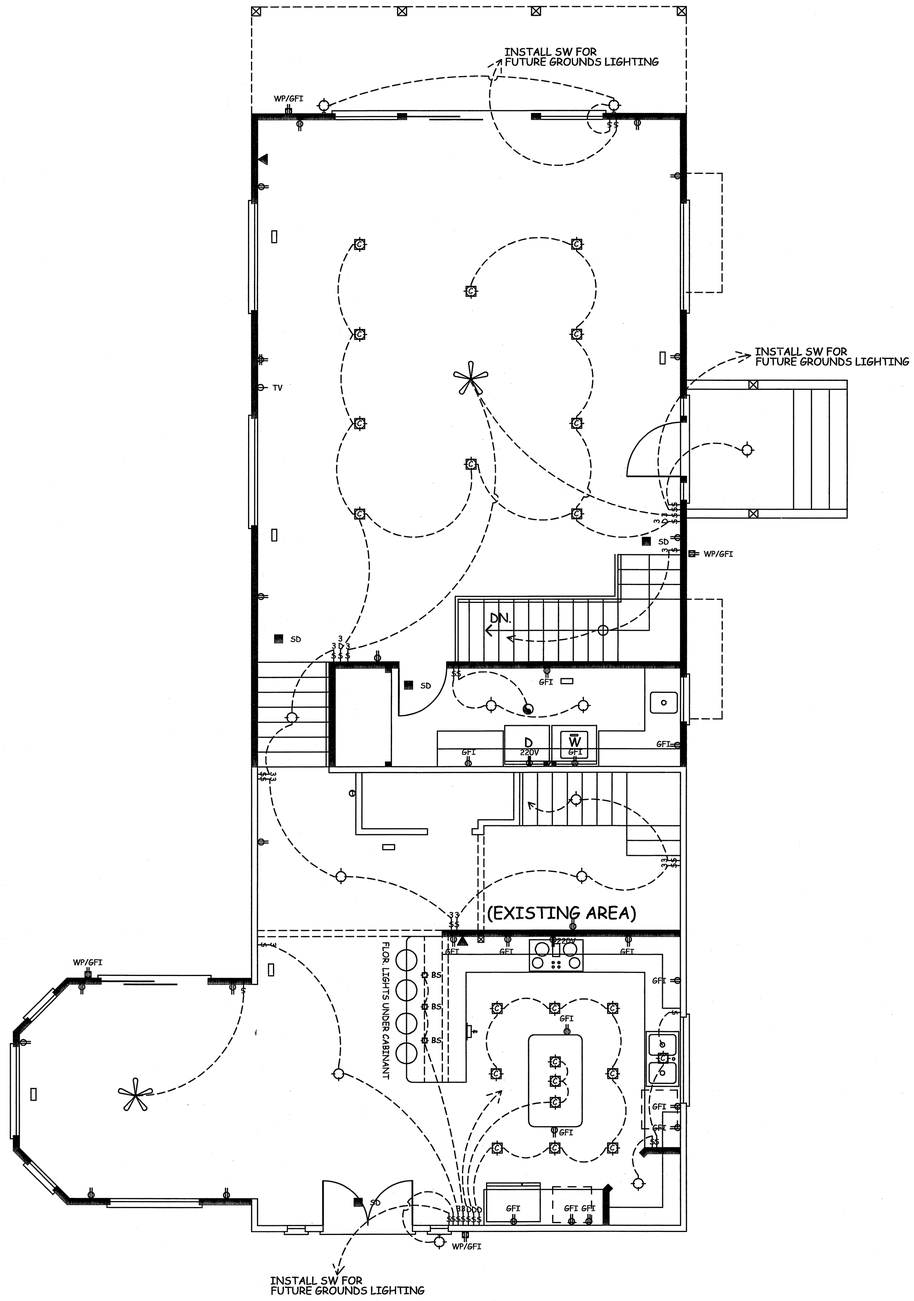
| SCALE | DATE |
|---|---|
| 1/4"=1' | 8/04 |

| SQ.FT. | DRAWN BY | S.B. |
|---|---|---|
| 2748 | CHECKED BY | |

JOB NO.
Dixon

E-2




## Second Floor

909 SQ. FT.

## First Floor

1150 SQ. FT. 2748 TOTAL

NOTE:
SEE SHEET E-1 FOR SYMBOLS AND KEYS

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El Dorado Hills
(916) 933-5644
A.P.N. # 67-051-08

First & Second Floor
Electrical Plan

Brad Dick : Principle

Engineer

REVISIONS

| SCALE | DATE |
|---|---|
| 1/4"=1' | 8/04 |
| SQ.FT. 2748 | DRAWN BY S.B. |
| | CHECKED BY |
| JOB NO. Dixon | |

E-1

# Floor Plan Keynotes

AS INDICATED ON PLANS BY (◇7◇)

1. CERAMIC TILES ON COUNTER AND SPLASH.
2. DISHWASHER.
3. DOUBLE SINK WITH DISPOSAL.
4. LINE OF UPPER CABINET.
5. COOK TOP. HOOD FAN AND LIGHTABOVE.
6. COOK TOP WITH OVEN BELOW AND MICROWAVE HOOD
7. REFRIGERATOR WITH TEE FOR ICE MAKER.
8. SALAD SINK (N/A)
9. 'HEAT-N-GLO ' '0' CLEARANCE DIRECT VENT FIREPLACE MODEL SL-350DVT . TESTED BY UNDERIGHTERS LABORATORIES. INSTALL PER MANUFACTURERS SPECIFICATIONS. ALL UNITS SHALL BE LISTED APPLIANCES. (N/A)
10. NON COMBUSTABLE HEARTH, MUST EXTEND A MINIMUM OF 20" FROM FACE OF FIREPLACE (N/A)
11. PANTRY
12. FULL LENGTH JOB MEASURED MIRROR.
13. INSTALL TUB AND O.H. SHOWER WITH CERAMIC TILE TO 72" ABOVE DRAIN INLET OVER AN APPROVED WATER RESISTANT TILE BACKING. INSTALL SHOWER HEAD.
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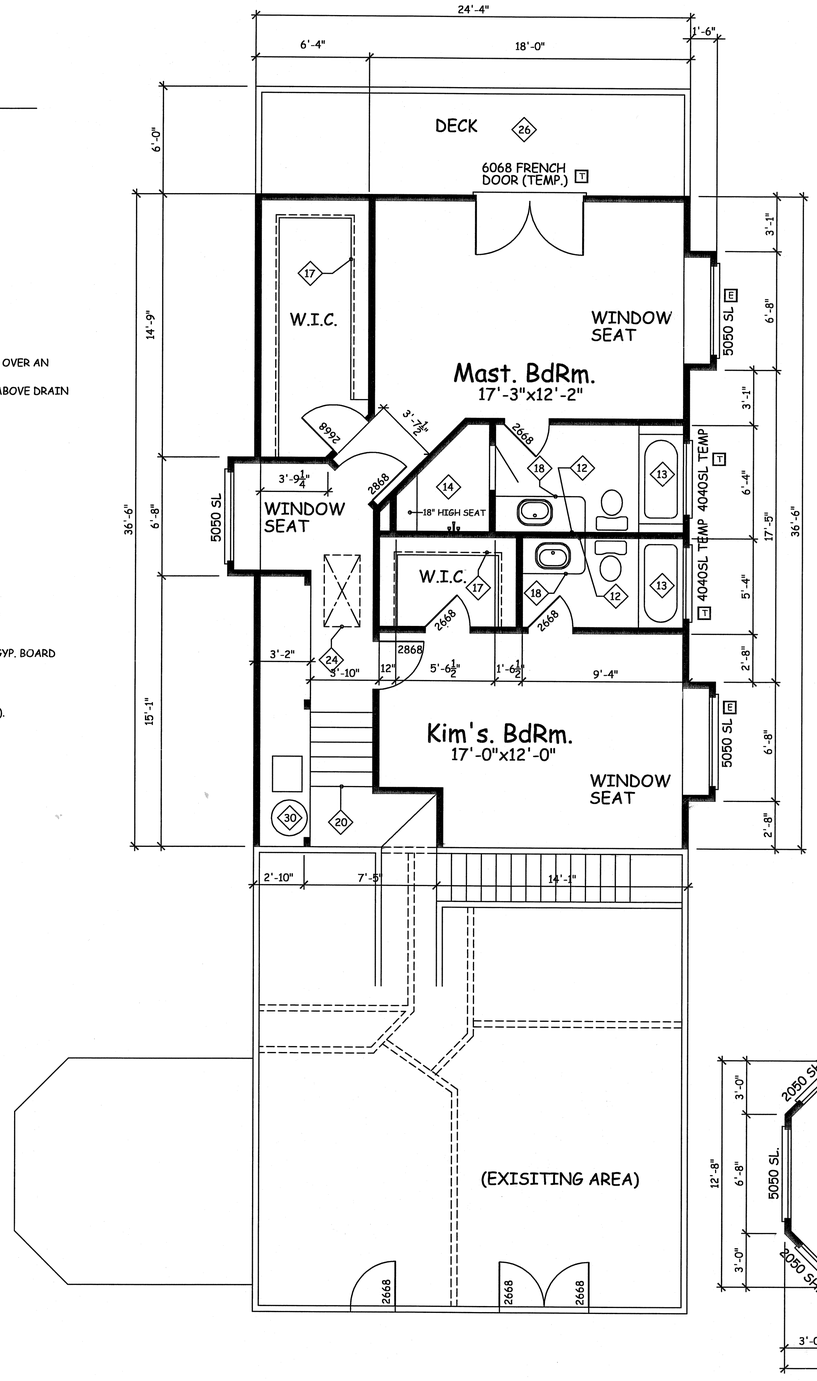


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909 SQ. FT.

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First & Second Floor Plan

Brad Dick : Principle

Engineer

REVISIONS

| SCALE | DATE |
|---|---|
| 1/4"=1' | 8/04 |
| SQ.FT. 2829 | DRAWN BY B.D. |
| | CHECKED BY |

JOB NO. Dixon

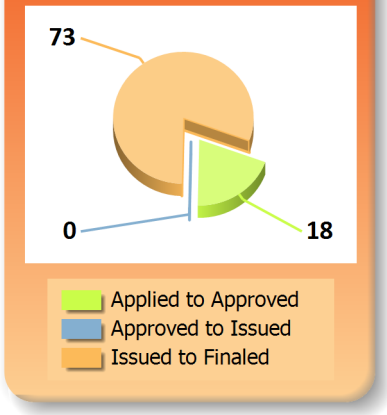
A-1

# Permit Details
## County of El Dorado

**PERMIT NUMBER**
**0366213**

| | | | |
|---|---|---|---|
| Description: **15.6 KW, 40 MODS FOR SFD** | | | |
| Type: **RESIDENTIAL SOLAR** | Subtype: **PHOTOVOLTAIC GROUND MOUNT** | Status: **FINALED** | Applied: **5/18/2023 TLC2** |
| Parcel No: **126020001** | Site Address: **3200 VERDE VALLE LN EL DORADO HILLS,CA 95762** | | Approved: **6/5/2023 WEM** |
| Subdivision: | Block: Lot: | | Issued: **6/5/2023 TLC2** |
| Lot Sq Ft: **0** | Building Sq Ft: **0** | Zoning: | Finaled: **8/17/2023 KAS** |
| Valuation: **$51,998.00** | Occupancy Type: | Construction Type: | Expired: **6/4/2025 TLC2** |
| No. Buildings: **0** | No. Stories: **0** | No. Unites: **0** | |
| Details: **SFD 63687 F 9/30/1991 -- TRAKIT** | | | |

**Process Summary**




## ADDITIONAL SITES

## CHRONOLOGY

| CHRONOLOGY TYPE | STAFF NAME | ACTION DATE | COMPLETION DATE | NOTES |
|---|---|---|---|---|
| FILE-RECORDS MAINTENANCE | RYANN FOX | 6/8/2023 | 6/27/2023 | FF INCOMPLETE- RTN TO TECH (APPLICANT NAME, EMAIL PHONE #) PLNG PKT, CALCS, PLANS TO BE SCANNED<br>FF COMPLETE- APP TO BE SCANNED |
| LETTER SENT | LADIVA BOODY | 6/13/2023 | 6/13/2023 | owner notification letter |
| PLAN LOCATION | TANYA CAIN | 6/5/2023 | 6/5/2023 | APP/PLANS TO F/F CART, ISSUED PERMIT AND JOB SET TO APPLICANT |

## CONDITIONS

## CONTACTS

| NAME TYPE | NAME | ADDRESS1 | CITY | STATE | ZIP | PHONE | FAX | EMAIL |
|---|---|---|---|---|---|---|---|---|
| APPLICANT | JASON SLUSHER | 900 RIVERSIDE PKY #100 | WEST SACRAMENTO | CA | 95605 | (800)885-9450 | | JASONSLUSHER@FREEDOMFOREVER.COM |

# Permit Details
## County of El Dorado

**PERMIT NUMBER**
**0366213**

### CONTACTS

| NAME TYPE | NAME | ADDRESS1 | CITY | STATE | ZIP | PHONE | FAX | EMAIL |
|---|---|---|---|---|---|---|---|---|
| CONTRACTOR | FREEDOM FOREVER LLC | 900 RIVERSIDE PKY #100 | WEST SACRAMENTO | CA | 95605 | (800)885-9450 | | PERMITSSAC@FREEDOMFOREVER.COM |
| OWNER | DIXON KIMBERLY | 3200 VERDE VALLE LANE | EL DORADO HILLS | CA | 95762 | (916)752-4986 | | dixonkim45@yahoo.com |

### FINANCIAL INFORMATION

| DESCRIPTION | ACCOUNT | QTY | AMOUNT | PAID | PAID DATE | RECEIPT # | CHECK # | METHOD | PAID BY | CLTD BY |
|---|---|---|---|---|---|---|---|---|---|---|
| PLNG RES ACCESSORY | 3720200 1401 | 0 | $144.00 | $144.00 | 6/5/23 | R47210 | VISA | EMV | FREEDOM FOREVER | TLC2 |
| REINSPECT FEE-BLDG | 3710100 1740 | 0 | $126.00 | $126.00 | 7/11/23 | E20232 | 1117632627 | ONLINE CREDIT | ALLEN MCALLISTER | EPRS |
| RES SOLAR GM APPLICATION | 3710100 0220 | 0 | $181.00 | $181.00 | 6/5/23 | R47210 | VISA | EMV | FREEDOM FOREVER | TLC2 |
| RES SOLAR GM INSPECTION | 3710100 0220 | 0 | $252.00 | $252.00 | 6/5/23 | R47210 | VISA | EMV | FREEDOM FOREVER | TLC2 |
| Total Paid for BUILDING SERVICES: | | | $703.00 | $703.00 | | | | | | |
| CA GREEN FEE | 7937504 2900 | 0 | $3.00 | $3.00 | 6/5/23 | R47210 | VISA | EMV | FREEDOM FOREVER | TLC2 |
| Total Paid for CA GREEN FEE: | | | $3.00 | $3.00 | | | | | | |
| GEN PLAN IMPL FEE | 3730300 0220 | 0 | $13.88 | $13.88 | 6/5/23 | R47210 | VISA | EMV | FREEDOM FOREVER | TLC2 |
| Total Paid for GEN PLAN IMPL FEE: | | | $13.88 | $13.88 | | | | | | |
| TECH FEE | 3700000 0260 | 0 | $18.51 | $18.51 | 6/5/23 | R47210 | VISA | EMV | FREEDOM FOREVER | TLC2 |
| Total Paid for TECH FEE: | | | $18.51 | $18.51 | | | | | | |
| TOTALS: | | | $738.39 | $738.39 | | | | | | |

### INSPECTIONS

| SEQID | INSPECTION TYPE | INSPECTOR | SCHEDULED DATE | COMPLETED DATE | RESULT | REMARKS | NOTES |
|---|---|---|---|---|---|---|---|
| | PERMIT FINAL** | IA6 | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | PGE ELECTRIC TAG | IA6 | | | | | |
| | PERMIT FINAL** | IA6 | | | | am request | |
| | SOLAR- GROUND MOUNT FOOTINGS | IA6 | | | | CORRECTION | |
| | SOLAR- GROUND MOUNT FINAL | IA6 | | | | AM | |
| | PERMIT FINAL** | IA6 | | | | CORRECTION | |
| | SOLAR- GROUND MOUNT FOOTINGS | MST | 6/21/2023 | 6/21/2023 | PASS | PM Request | Footings only. |
| | PERMIT FINAL** | MST | 6/21/2023 | 6/22/2023 | CANCELLED | | |
| | SOLAR- GROUND MOUNT FINAL | WPL | 7/7/2023 | 7/7/2023 | CORRECTION | AM | 1. Main breaker in main service panel needs to be D rated to 175 amp.2. Wire size at install does not match wire size on plans.3. 60 amp solar breaker is in the main service panel. On the plans it shows it in the sub panel.4. AC disconnect at ground mount array, wire size do not match on either side of fuses.5. Please revise plans, have plans, stamped and approved by county.6. A reinspection fee will be added. Please pay reinspection fee before recalling inspection. |
| | PERMIT FINAL** | WPL | 7/7/2023 | 7/7/2023 | CANCELLED | AM | 1. Main breaker in main service panel needs to be D rated to 175 amp.2. Wire size at install does not match wire size on plans.3. 60 amp solar breaker is in the main service panel. On the plans it shows it in the sub panel.4. AC disconnect at ground mount array, wire size do not match on either side of fuses.5. Please revise plans, have plans, stamped and approved by county.6. A reinspection fee will be added. Please pay reinspection fee before recalling inspection. |
| | TRENCH BED BACKFILL | WPL | 7/7/2023 | 7/7/2023 | PASS | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | PERMIT FINAL** | KRS2 | 7/14/2023 | 7/14/2023 | CORRECTION | am request | 1. Corrections noted on July 7 have been completed.2. Two additional items are washers at the disconnect conduits and a fitting on the back of the inverter, which will be corrected today. Photos to be sent. |
| | SOLAR- GROUND MOUNT FOOTINGS | KRS2 | 7/14/2023 | 7/14/2023 | CORRECTION | | 1. See permit final for additional corrections. |
| | SOLAR- GROUND MOUNT FINAL | KRS2 | 7/14/2023 | 7/14/2023 | CORRECTION | AM | 1. Schedule EDHFD CO & smoke detector installation verification inspection. 2. Install washers and larger nuts at conduit connections to knife blade disconnects.3. Install fitting at rear of inverter at array where wiring enters. |
| | SOLAR- GROUND MOUNT FOOTINGS | KRS2 | 7/14/2023 | 7/14/2023 | PASS | | |
| | PERMIT FINAL** | KRS2 | 7/14/2023 | 7/14/2023 | CORRECTION | | 1. Schedule EDHFD CO & smoke detector installation verification inspection. 2. Install washers and larger nuts at conduit connections to knife blade disconnects.3. Install fitting at rear of inverter at array where wiring enters. |
| | PERMIT FINAL** | KRS2 | 7/14/2023 | 7/14/2023 | CORRECTION | | 1. Schedule EDHFD CO & smoke detector installation verification inspection. 2. Install washers and larger nuts at conduit connections to knife blade disconnects.3. Install fitting at rear of inverter at array where wiring enters. |
| | FD SMOKE ALARM CO ALARM FINAL | 1056 | 8/9/2023 | 8/9/2023 | CORRECTION | Left VM w/ homeowner to schedule 7/27 | Left VM w/ homeowner to schedule 7/27.<br>Needs to fix or replace the smoke alarm up the few steps just outside the kitchen. Needs to add 2 CO alarms upstairs, one outside the two side by side bedrooms and one outside the master. Needs to retest the alarms inside the two bedrooms. |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | FD SMOKE ALARM CO ALARM FINAL | 1056 | 8/10/2023 | 8/10/2023 | PASS | | |
| | PERMIT FINAL** | KAS | 8/17/2023 | 8/17/2023 | PASS | OK TO IN-HSE FINAL PER KEVIN S. | |

## PARENT PROJECTS

## REVIEWS

| REVIEW TYPE | REVIEWER | SENT DATE | DUE DATE | RETURNED DATE | STATUS | REMARKS | NOTES |
|---|---|---|---|---|---|---|---|
| APPLICATION COMPLETENESS REVIEW | TANYA CAIN | 5/18/2023 | 5/21/2023 | 6/5/2023 | APPROVED | | |
| EM SEPTIC | TANYA CAIN | 5/18/2023 | 6/15/2023 | 6/5/2023 | NOT APPLICABLE | NOT ON SEPTIC | |
| PLAN CHECKER- RES MINOR | WILLIAM MC DOWELL | 5/18/2023 | 6/8/2023 | 6/5/2023 | APPROVED | | |
| PLNG RES MINOR | CERISSA DEITCHMAN | 5/18/2023 | 6/17/2023 | 6/5/2023 | APPROVED | | RE-5 GM Solar only - No oak impacts |

## BOND INFORMATION

## ATTACHMENTS

| Attachment Type | CREATED | OWNER | DESCRIPTION | PATHNAME | SUBDIR | ETRAKIT ENABLED |
|---|---|---|---|---|---|---|
| DOC | 7/14/2023 | KEVIN SPARKS | PERMIT FINAL1689353312.PDF | PERMIT FINAL1689353312.PDF | | 0 |
| DOC | 6/13/2023 | RYANN FOX | 366213 CALCS.pdf | 366213 CALCS.pdf | | 0 |
| DOC | 6/13/2023 | RYANN FOX | 366213 AEC PLANS.pdf | 366213 PLANS.pdf | | 0 |
| DOC | 6/13/2023 | RYANN FOX | 366213 PLNG PKT.pdf | 366213 PLNG PKT.pdf | | 0 |
| DOC | 6/27/2023 | RYANN FOX | 366213 APP.pdf | 366213 APP.pdf | | 0 |
| DOC | 6/5/2023 | TANYA CAIN | 366213 - ParcelReview.pdf | 366213 - ParcelReview.pdf | | 0 |
| DOC | 6/5/2023 | TANYA CAIN | 1029644 - CSLB.pdf | 1029644 - CSLB.pdf | | 0 |

# Permit Details
## County of El Dorado

**PERMIT NUMBER**
**0366213**

| ATTACHMENTS | | | | | | |
|---|---|---|---|---|---|---|
| **Attachment Type** | **CREATED** | **OWNER** | **DESCRIPTION** | **PATHNAME** | **SUBDIR** | **ETRAKIT ENABLED** |
| DOC | 7/7/2023 | WILLIAM LETCHWORTH | SOLAR- GROUND MOUNT FINAL1688751650.PDF | SOLAR- GROUND MOUNT FINAL1688751650.PDF | | 0 |
| PHOTO | 7/14/2023 | DONALD KNIGHT | image.jpg | image.jpg | | 0 |

# NOTICE OF PREPARATION
# OF A DRAFT ENVIRONMENTAL IMPACT REPORT

**Date:** February 23, 2024

**To:** Agencies and Interested Parties

**From:** Bianca Dinkler, Project Planner, County of El Dorado

**Subject:** **Notice of Preparation of Draft Environmental Impact Report and Notice of Public Scoping Meeting for the Generations at Green Valley Project (General Plan Amendment GPA22-0001, Rezone Z22-0001, Tentative Subdivision Map TM22-0001, Development Agreement DA24-0001)**

**Review Period:** February 26, 2024 to March 26, 2024

The County of El Dorado (acting as the Lead Agency) is releasing this Notice of Preparation (NOP) on February 26, 2024, for the preparation of an Environmental Impact Report (EIR) for the proposed Generations at Green Valley Project (project) located in unincorporated El Dorado County (County). The NOP initiates the environmental scoping process in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21080.4) and CEQA Guidelines (14 California Code of Regulations (CCR) Section 15082). The purpose of an NOP is to provide sufficient information about the proposed project and its potential environmental effects to allow public agencies, organizations, tribes, and interested members of the public the opportunity to provide a meaningful response related to the scope and content of the EIR, including feasible mitigation measures and project alternatives that should be considered in the EIR (CEQA Guidelines, 14 CCR Section 15082(b)). The proposed project and location are briefly described below.

## PROVIDING COMMENTS

El Dorado County is soliciting written comments from public agencies, organizations, tribes, and individuals regarding the scope and content of the environmental document. Because of time limits mandated by State law, comments should be provided at the earliest possible date, but no later than 5:00 p.m. on March 26, 2024. Please send all comments to:

Bianca Dinkler, Senior Planner
County of El Dorado Planning Department
2850 Fairlane Court, Building C
Placerville, CA 95667
Email: generationsatgreenvalley@edcgov.us

Agencies that are responsible agencies or trustee agencies will need to use the EIR when considering permits or other approvals for the project. Such agencies should provide the name of a contact person, phone number, and email address in their comment. Comments provided by email should include "Generations at Green Valley Project NOP Comment" in the subject line, and the name and physical address of the commenter in the body of the email.

## PROJECT LOCATION

The project site is located in an unincorporated area of El Dorado County (Figure 1). Existing land uses in the project area consist of single-family residences and rural residential areas. The project site encompasses approximately 280 acres located on five current parcels, Assessor's Parcel Numbers (APN) 126-020-001, 126-020-002, 126-020-003, 126-020-004, and 126-150-023. The majority of the site is located south of Green Valley Road, with the exception of northern tip of the site that is north of Green Valley Road (portion of APN 126-150-023). This portion of the project is being removed as part of Boundary Line Adjustment that is being processed under a separate application to the County. The project also includes two proposed access roadway connections to Green Valley Road (C-Drive and A-Drive) that would use existing easements to access Green Valley Road.

## PROJECT DESCRIPTION

The El Dorado County General Plan land use designations for the site are Low Density Residential (LDR), with approximately 1.4 acres designated Open Space (OS) associated with an existing Sacramento Municipal Utility District (SMUD) utility easement. Zoning on the site consists primarily of Residential Estate, Ten-Acre (RE-10), with the SMUD easement zoned as Recreational Facilities, Low Intensity (RF-L). The proposed C-Drive extension area is zoned RE-5, while the proposed A-Drive extension area is zoned RE-10.

The Generations at Green Valley Project proposes to amend the General Plan land use designations to High Density Residential (HDR), Low Density Residential (LDR), and Public Facilities (PF). The project would also rezone the site to Residential, Single-unit (R1), Open Space (OS), Recreational Facilities, High Intensity (RF-H), and Residential Estate, Five-Acre (RE-5) (Figure 2). The proposed development area of the project would be within the General Plan designated El Dorado Hills Community Region boundary.

The project proposes a Tentative Subdivision Map that would subdivide the project site into 379 residential lots, clubhouse lot, park site lot, thirteen landscape lots, nine (9) open space lots, and three (3) lots for project roadways. Age restrictions would apply to 214 of the residential lots in the project. Proposed residential lot sizes would range from 6,000 square feet up to 5.7 acres. Roadway access to the project would be provided through two (2) main connections with Green Valley Road and three (3) emergency access roads connecting to existing roadways along the project's boundary. The project also anticipates constructing improvements and adding additional lanes to segments of Green Valley Road. The proposed park site would be 4.0 acres and would be proposed for dedication to the El Dorado Hills Community Services District (CSD). The design of the park site would be determined by the El Dorado Hills CSD, but may include a baseball diamond, tot lot, parking lot, and a restroom. The clubhouse site would be owned and maintained by the homeowners association (HOA) and may include community building, pool, barbeque facilities, bocci courts, and a pickle ball court. The open space would be owned and maintained by the HOA.

The project is proposing the following offsite transportation improvements as part of compliance with the El Dorado County Transportation and Circulation Element policies TC-Xd, TC-Xe, and TC-Xf:

- Optimize traffic signal coordination on El Dorado Hills Boulevard/Latrobe Road from White Rock Road to Saratoga Way (North).
- Modify traffic signal phasing and hardware for the Silva Valley Parkway and Harvard Way intersection to provide a southbound right-turn overlap.

In addition to these improvements, the project would construct improvements to Green Valley Road at the project proposed access points with C-Drive and A-Drive that would provide left- and right-turn pockets to promote safe traffic flow.

With the exception of proposed onsite wastewater systems for the RE-5 lots and park site, the project would obtain water and wastewater service from El Dorado Irrigation District (EID) and would involve the following offsite water and wastewater improvements that are shown in Figure 3:

Offsite Water Supply Improvements:

- Connection to an existing 8-inch water distribution pipeline within Lima Way on the project's western boundary.
- Construction of a new water distribution pipeline from the project's southern boundary to an existing 10-inch pipeline located in Greenview Drive.
- Construction of a new water distribution pipeline from the project's eastern boundary along Green Valley Road to an existing 12-inch pipeline west of Pleasant Grove Middle School.

Offsite Wastewater Conveyance Improvements:

- Connection to an existing 8-inch gravity wastewater conveyance pipeline within Lima Way on the project's western boundary.
- Upsizing of approximately 1,600 linear feet of existing gravity wastewater pipeline upstream of the Highland Hills Lift Station.
- Construction of approximately 8,500-linear foot force main from the Highland Hills Lift Station to an existing 15-inch gravity wastewater pipeline that flows to the St. Andrews Lift Station.

Other utility improvements for the project would include the following:

- Construction of eight (8) onsite detention/water quality basins,
- Improvement of existing electrical cable facilities and addition of new electrical cable along Sangiovese Drive, Appian Way (new trenching anticipated along Appian Way), and Lima Way; and
- Improvements to the existing electrical facilities along eastern portion of the project site.

In addition to the General Plan Amendment, Rezone, and Tentative Subdivision Map entitlement requests, the project is also requesting that the El Dorado Local Agency Formation Commission (LAFCO) approve the annexations of the site into the following districts:

- El Dorado Hills Fire Department (also known at the El Dorado Hills County Water District/Fire Protection District) for fire protection services,
- El Dorado Hills CSD for parks, recreation, and other community services, and

- EID for water and wastewater services.

## POTENTIAL ENVIRONMENTAL IMPACTS

Pursuant to the CEQA Guidelines, 14 CCR Section 15063(a), the County has determined that an EIR is clearly required for the project and has elected to not prepare an initial study. The County anticipates that the EIR will address the following topic areas:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Archaeological and Historic Resources
- Biological Resources
- Cultural Resources
- Energy
- Geology, Soils, and Mineral Resources
- Greenhouse Gas Emissions
- Hazards, and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services and Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

Full documentation of the factual basis for this determination will be provided in the EIR. Unless specific comments are received during the revised NOP public comment period that indicates a potential for the project to result in significant impacts, these topics will not be analyzed further in the EIR.

## ALTERNATIVES

Pursuant to CEQA and Section 15126.6 of the State CEQA Guidelines, the EIR will also analyze a reasonable range of alternatives that would reduce or avoid one or more significant environmental impacts identified in the EIR, and will include an analysis of the comparative environmental impacts of feasible alternatives to the proposed project. Alternatives would include a No Project Alternative, and one or more alternatives to address other significant effects of the proposed project that are identified in the EIR.

**FINDING**

The proposed project may have a significant effect on the environment; therefore, an EIR is required. The purpose of the EIR is to provide information about potentially significant physical environmental impacts of the proposed project, identify possible ways to minimize the potentially significant impacts, and describe and analyze possible alternatives to the project. Publication of a Notice of Preparation, Initial Study, or EIR does not indicate a decision by the County to approve or disapprove a proposed project. However, before making any such decision, the decision makers must review and consider the information contained in the EIR.

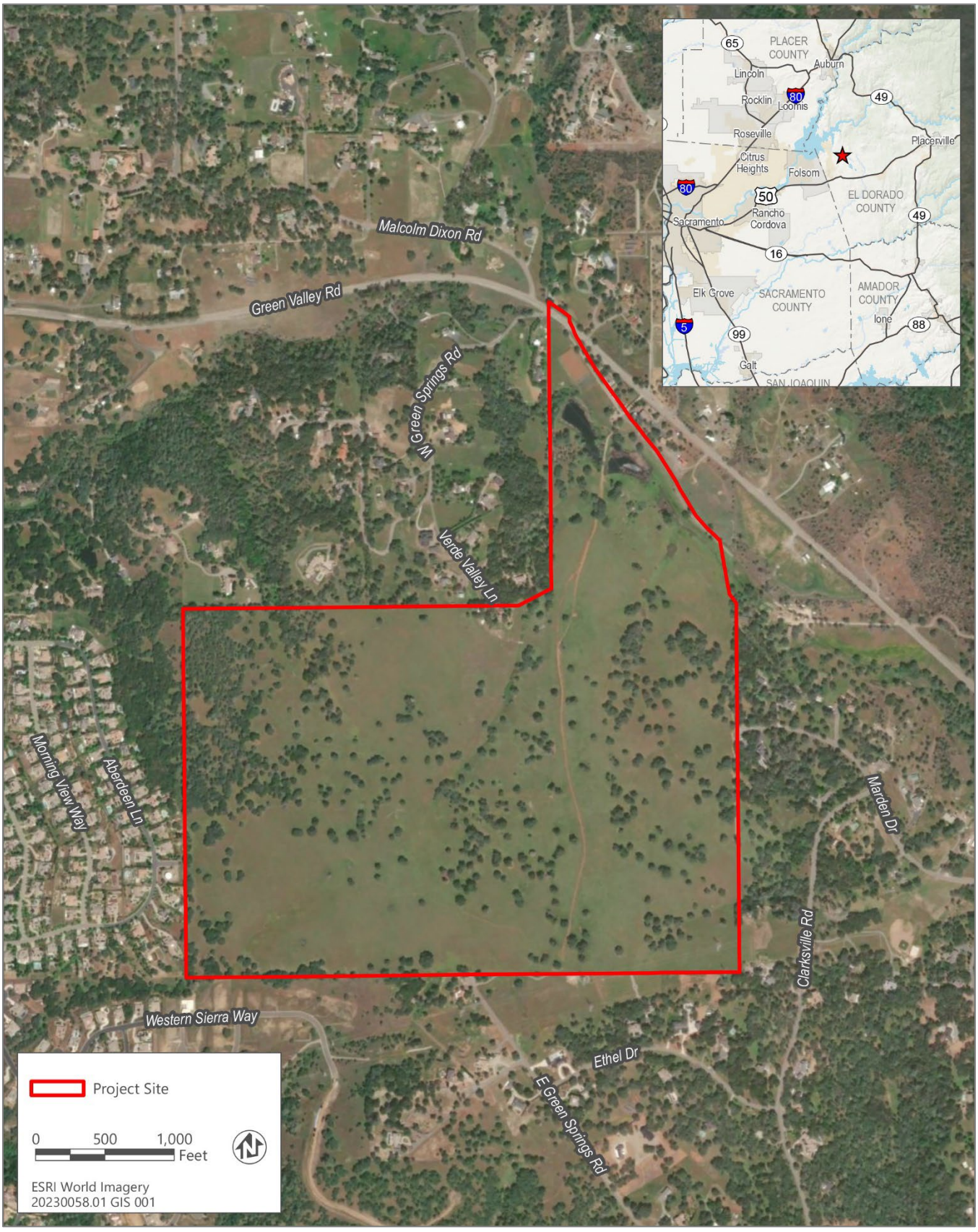
## SCOPING MEETING

El Dorado County will hold a public scoping meeting to receive verbal comments regarding the scope and content of the environmental document and answer general questions regarding the environmental process. The meeting will be held in-person with a remote option via Zoom on Tuesday, March 12, 2024 from 5:30 p.m. to 7:30 p.m. at the El Dorado Hills Fire Station, Station 85, located at 1050 Wilson Boulevard, El Dorado Hills, CA 95762. Here is the Zoom link: https://us06web.zoom.us/j/83062366195

Written comments regarding the scope and content of the environmental document may be submitted throughout the scoping period, which closes at 5:00 p.m. on March 26, 2024.

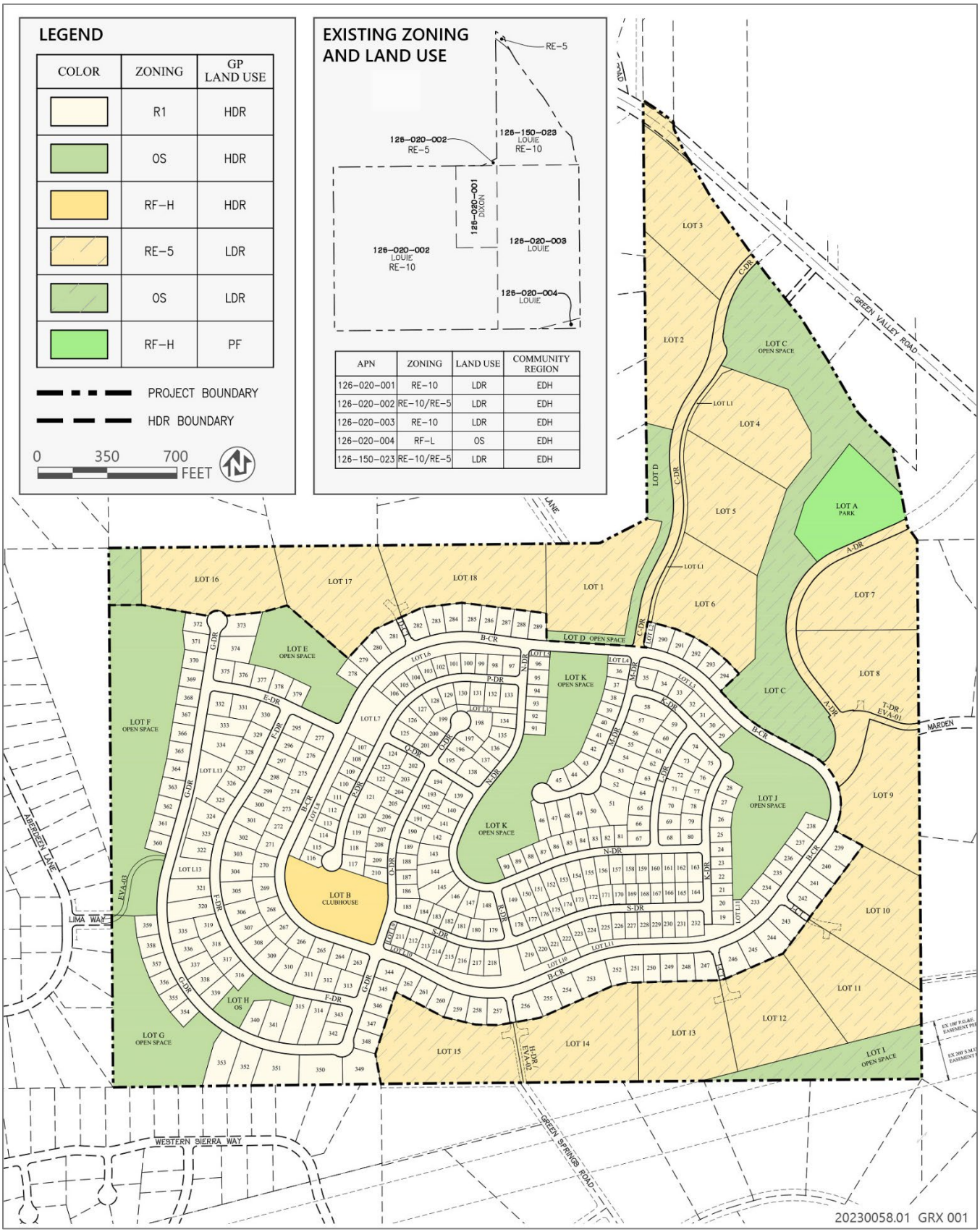
If you work for a responsible or trustee agency, we need to know your agency's views regarding the scope and content of the environmental information that is relevant to your agency's statutory responsibilities in connection with the proposed project; your agency may need to use the EIR when considering a permit or other approval for this project. We will also need the name of the contact person for your agency.

The County of El Dorado is committed to ensuring that persons with disabilities are provided the resources to participate in its public meetings. If you require accommodation, please contact Planning Services at 530-621-5355 or via e-mail, planning@edcgov.us.



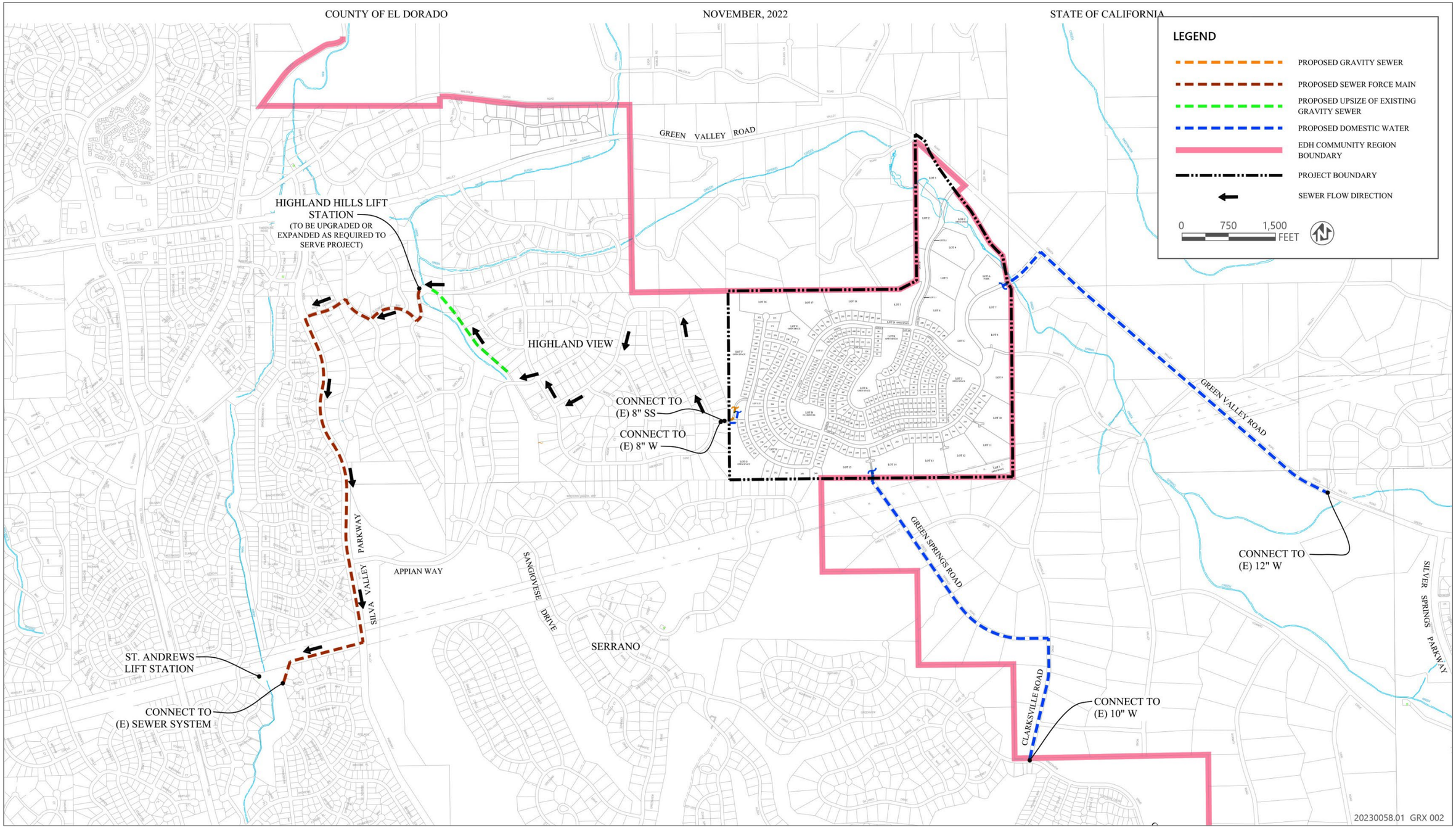

Source: adapted by Ascent in 2023

**Figure 1 Project Location**




Source: Image produced and provided by CTA Engineering and Surveying in 2022

**Figure 2 Proposed Site Plan**




Source: Image produced and provided by CTA Engineering and Surveying in 2022

**Figure 3 Proposed Offsite Water and Wastewater Improvements**

# ONSITE SEWER & WATER EXHIBIT

# GENERATIONS AT GREEN VALLEY

COUNTY OF EL DORADO | NOVEMBER, 2022 | STATE OF CALIFORNIA

## LEGEND

- SUBDIVISION BOUNDARY
- PROPOSED WATER LINE
- PROPOSED GRAVITY SEWER LINE
- PROPOSED SEWER FORCE MAIN
- PROPOSED INDIVIDUAL SEWER PUMP
- PROPOSED SEPTIC SYSTEM
- POTENTIAL DISPOSAL AREA
- EXISTING GRAVITY SEWER LINE
- EXISTING WATER LINE
- JURISDICTIONAL WATERS SEE REPORT PREPARED BY MADRONE ECOLOGICAL CONSULTING FOR ADDITIONAL INFORMATION
- EXISTING SLOPES ≥ 30%
- EXISTING WELL (APPROX LOCATION BASED ON AVAILABLE INFORMATION)

0 100' 200' 400'

SCALE: 1" = 200'

MALCOM DIXON ROAD

OX TRAIL WAY

WEST GREEN SPRINGS ROAD

GREEN VALLEY ROAD

LEXI WAY

VERDE VALLE LANE

EXISTING WELL TO REMAIN

EXISTING LEACH FIELD TO REMAIN (APPROX LOCATION)

(E) WELL TO BE DESTROYED

POTENTIAL VAULT RESTROOM (LOCATION TBD)

SEE OFFSITE SEWER & WATER IMPROVEMENTS

MARDEN DRIVE

CLARKSVILLE ROAD

ABERDEEN LANE

LIMA WAY

SEE OFFSITE SEWER & WATER IMPROVEMENTS

EXISTING EID TANK

(E) WELL TO BE DESTROYED

SEE OFFSITE SEWER & WATER IMPROVEMENTS

WESTERN SIERRA WAY

E. GREEN SPRINGS ROAD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# PLANNING AND BUILDING DEPARTMENT

http://www.edcgov.us/Government/Building


**PLACERVILLE OFFICE:**
2850 Fairlane Court, Placerville, CA 95667
**BUILDING**
(530) 621-5315 bldgdept@edcgov.us
**PLANNING**
(530) 621-5355 planning@edcgov.us

**LAKE TAHOE OFFICE:**
924 B Emerald Bay Road
South Lake Tahoe, CA 96150
(530) 573-3330
bldgdept@edcgov.us


## PARCEL RESEARCH REQUEST

**All information must be complete and accurate for us to process this request.**
**Research cannot be completed without the parcel number.**

Research requests can be submitted in person, mailed to the address above, or emailed to mailto:BuildingResearch@edcgov.us. Research results will only be held for 30 days after notification of research completion. Research fees are based on a tiered system as follows:

***Tier 1:*** Records dated 1988 – There will be **NO** charge
***Tier 2:*** Records dated 1975 – 1988 There will be a **$39.00** charge
***Tier 3:*** Records prior to 1975 – Charges are based on Time and Materials (T&M) at our hourly rate of $144.00

Full payment is required at the completion of research for any additional costs. If an estimate of work is greater than $50.00, an additional deposit will be required to complete the research.

**ASSESSOR'S PARCEL NUMBER (APN):** _____ (ex: 006-138-06-1) ***APN MUST BE LISTED TO PROCESS***

**PROPERTY ADDRESS:** _____

**DATE:** _____ **CURRENT PARCEL OWNER:** _____

**Approximate age of structure(s) (no records prior to 1960):** _____ **year or years built:** _____

***Note: Contact Environmental Management Dept. at (530) 621-5300 for research on Septic Systems installed after 1978.***

**Check specific research requested:**

- ☐ **ALL** Permits
- ☐ Grading Permit
- ☐ Plot Plan
- ☐ Floor Plan
- ☐ Dwelling Permit
- ☐ Manufactured Home
- ☐ Accessory Structure
- ☐ Swimming Pool Permit
- ☐ Encroachment Permit
- ☐ Inspection Records
- ☐ Septic Permit (prior to 1978)
- ☐ Other records: **Explain**: _____

**South Lake Tahoe:**

- ☐ Coverage Information
- ☐ Site Assessment

---

Please provide the following information so that we may process your request:

☐ Mail to the address below ☐ Email ☐ Will pick up at County Office

**Requestor's Name** (Please Print): _____ **Phone:** (_____) _____ - _____

**Mailing Address**: _____

**City:** _____ **State:** _____ **Zip Code**: _____

**Email**:_____

(OFFICE USE ONLY)

Date Received: _____ Received by: _____ Parcel Activity # _____

Amount Received: $ _____ ☐ Cash ☐ Check # _____ Receipt # _____

# PLANNING AND BUILDING DEPARTMENT

For Office Use Only – APN:

## AFFIDAVIT

## Request for Duplication of the Official Copy of Building Plans

I request a duplicate copy of the official building plans for permit number _____

**Original Owner**

_____ Initial

I affirm I am the original owner, and this copy is for replacement of plans during construction which the permit it still active.

**OR**

**Current Owner (Not Original Owner) and All Others**

I attest[1]

- That the copy of the plans shall only be used for the maintenance, operation, and use of the building.
- That drawings are instruments of professional service and are incomplete without the interpretation of the certified, licensed, or registered professional of record.
- That Business and Professional code Section 5536.25(a) states that a licensed architect who signs and stamps plans, specifications, reports, or documents shall not be responsible for damage caused by subsequent changes to or uses of those plans, specifications, reports, or documents, where the subsequent changes or uses, including changes or uses made by state or local government agencies, are not authorized or approved in writing by the licensed architect who originally signed the plans, specifications, report or documents, provided that the written authorization or approval was not unreasonably withheld by the architect and the architectural service rendered by the architect who signed and stamped the plans, specifications, reports, or documents was not also a proximate cause of the damage.

_____ Initial

I have read the items above and acknowledge compliance with the provisions.

_____ *Printed name of the person requesting copy of plans*

_____ *Telephone Number*

_____ *Address*

_____ *State*

_____ *Zip Code*

_____ *Signature of the person requesting copy of plans*

_____ *Date*

.....

*For Office Use Only – Attach additional names/addresses on separate page, if necessary*

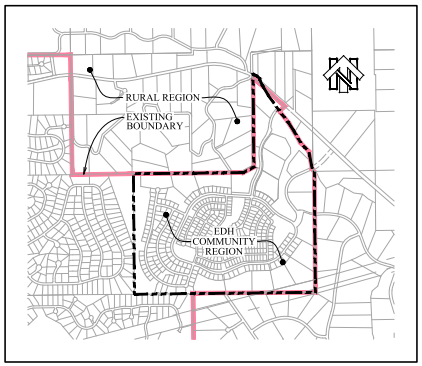
| | ***Original Owner*** | ***Current Owner*** | ***Board of Directors*** |
|---|---|---|---|
| Name | | | |
| Address | | | |
| City | | | |
| State/Zip | | | |
| Date Sent/Initials | | | |
| Date Received | | | |
| | ***Professional of Record*** | ***Professional of Record*** | ***Professional of Record*** |
| Name | | | |
| Address | | | |
| City | | | |
| State/Zip | | | |
| Date Sent/Initials | | | |
| Date Received | | | |

[1] Per California Health & Safety Code Section 19851 (c)

# EXISTING & PROPOSED GENERAL PLAN LAND USE

# GENERATIONS AT GREEN VALLEY

COUNTY OF EL DORADO | APRIL, 2024 | STATE OF CALIFORNIA




COMMUNITY REGION

NTS




PROPOSED GENERAL PLAN (GP) LAND USE

SCALE: 1" = 200'

LEGEND

| COLOR | GP LAND USE | AREA |
|---|---|---|
| | HDR | 155.86 AC |
| | LDR | 120.84 AC |
| | PF | 4.00 AC |

PROJECT BOUNDARY

GP LAND USE BOUNDARY

0 100' 200' 400'

SCALE: 1" = 200'




| APN | LAND USE | AREA |
|---|---|---|
| 126-020-001 | LDR | 20.30 AC |
| 126-020-002 | LDR | 141.99 AC |
| 126-020-003 | LDR | 79.98 AC |
| 126-020-004 | OS | 1.28 AC |
| APO 126-130-081 & 126-091-045 | LDR | 0.45 AC |
| 126-150-023 | LDR | 36.70 AC |

EXISTING GP LAND USE

SCALE: 1" = 1000'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3233 Monier Circle, Rancho Cordova, CA 95742

T (916) 638-0916 ■ F (916) 638-0479 ■ www.ctaeng.net


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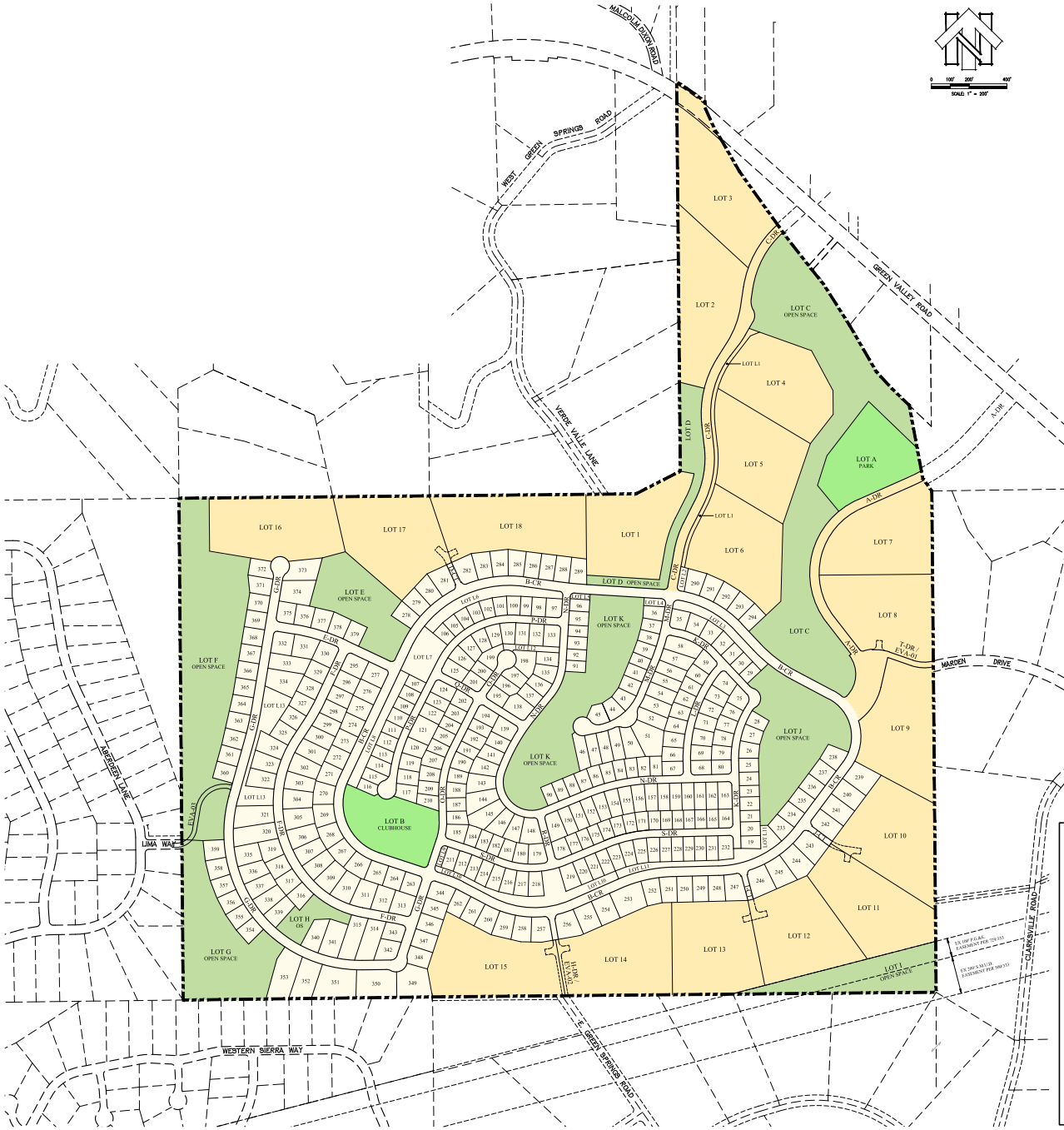
# EXISTING & PROPOSED ZONING

# GENERATIONS AT GREEN VALLEY

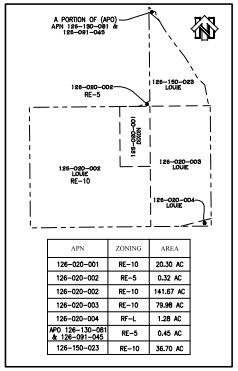
COUNTY OF EL DORADO | APRIL, 2024 | STATE OF CALIFORNIA




## LEGEND

| COLOR | ZONING | AREA |
|---|---|---|
| | R1 | 119.79 AC |
| | RE-5 | 99.10 AC |
| | OS | 54.51 AC |
| | RF-H | 7.30 AC |

PROJECT BOUNDARY




| APN | ZONING | AREA |
|---|---|---|
| 126-020-001 | RE-10 | 20.30 AC |
| 126-020-002 | RE-5 | 0.32 AC |
| 126-020-002 | RE-10 | 141.67 AC |
| 126-020-003 | RE-10 | 79.98 AC |
| 126-020-004 | RF-L | 1.28 AC |
| APO 126-130-081 & 126-091-045 | RE-5 | 0.45 AC |
| 126-150-023 | RE-10 | 36.70 AC |

## PROPOSED ZONING

SCALE: 1" = 200'

## EXISTING ZONING

SCALE: 1" = 1000'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# TENTATIVE MAP
# GENERATIONS AT GREEN VALLEY

COUNTY OF EL DORADO — OVERALL LAYOUT — STATE OF CALIFORNIA

MARCH, 2024 SHEET 1 OF 3

## OWNERS OF RECORD

JENNY LOUIE HELM, WAYLAND H. LOUIE AND JEN LYNN LOUIE, SUCCESSOR TRUSTEES OF THE FAY LOUIE 2001 LIVING TRUST, ET AL.
POST OFFICE BOX 2224
BAKERSFIELD, CA 93303

ROBERT AND AMANDA PENA
AND KIMBERLY DIXON
3000 VERDE VALLE LANE
EL DORADO HILLS, CA 95762

## APPLICANT

GREEN VALLEY ROAD BENEFITS, LLC
110 BLUE RAVINE ROAD, SUITE 209
FOLSOM, CA 95630

## ENGINEER

cta Engineering & Surveying
Civil Engineering Land Surveying Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742

## MAP SCALE

1" = 200'

## CONTOUR INTERVAL

CONTOUR INTERVAL = 1' FOOT (5' FEET SHOWN)

## SOURCE OF TOPOGRAPHY

AERIAL PHOTOGRAMMETRY

## SECTION, TOWNSHIP and RANGE

SECTION 24, T.10 N., R.8 E. M.D.M.

## ASSESSOR'S PARCEL NUMBERS

A.P.N. 126-020-001
A.P.N. 126-020-002
A.P.N. 126-020-003
A.P.N. 126-020-004
A.P.N. 126-150-023

## PRESENT & PROPOSED ZONING

SEE ZONING MAP AS PART OF THIS APPLICATION

## TOTAL AREA

280.70 ACRES

## TOTAL NUMBER OF PARCELS

### RESIDENTIAL LOTS

| | |
|---|---|
| SINGLE FAMILY LOTS - 378 (214 AGE RESTRICTED) | 174.42 AC |
| EXISTING RESIDENCE (LOT1) - 1 | 5.00 AC |

### LETTERED LOTS

| | |
|---|---|
| PARK - LOT A | 4.00 AC |
| CLUBHOUSE - LOT B | 3.30 AC |
| OPEN SPACE - LOTS C THRU K | 54.51 AC |
| LANDSCAPE LOTS - L1 THRU L13 | 8.00 AC |
| ROADWAY - R1 THRU R3 | 31.47 AC |

## MINIMUM RESIDENTIAL LOT AREA

6,000 SQUARE FEET

## WATER SUPPLY and SEWAGE DISPOSAL

EL DORADO IRRIGATION DISTRICT WITH PRIVATE SEPTIC SYSTEM (7 EA + 1 EXISTING)

## PROPOSED STRUCTURAL FIRE PROTECTION

EL DORADO HILLS COUNTY WATER DISTRICT
(EL DORADO HILLS FIRE DEPARTMENT)

## DATE OF PREPARATION

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BRIAN M. ALLEN P.E. 60764 — 3/25/24 DATE

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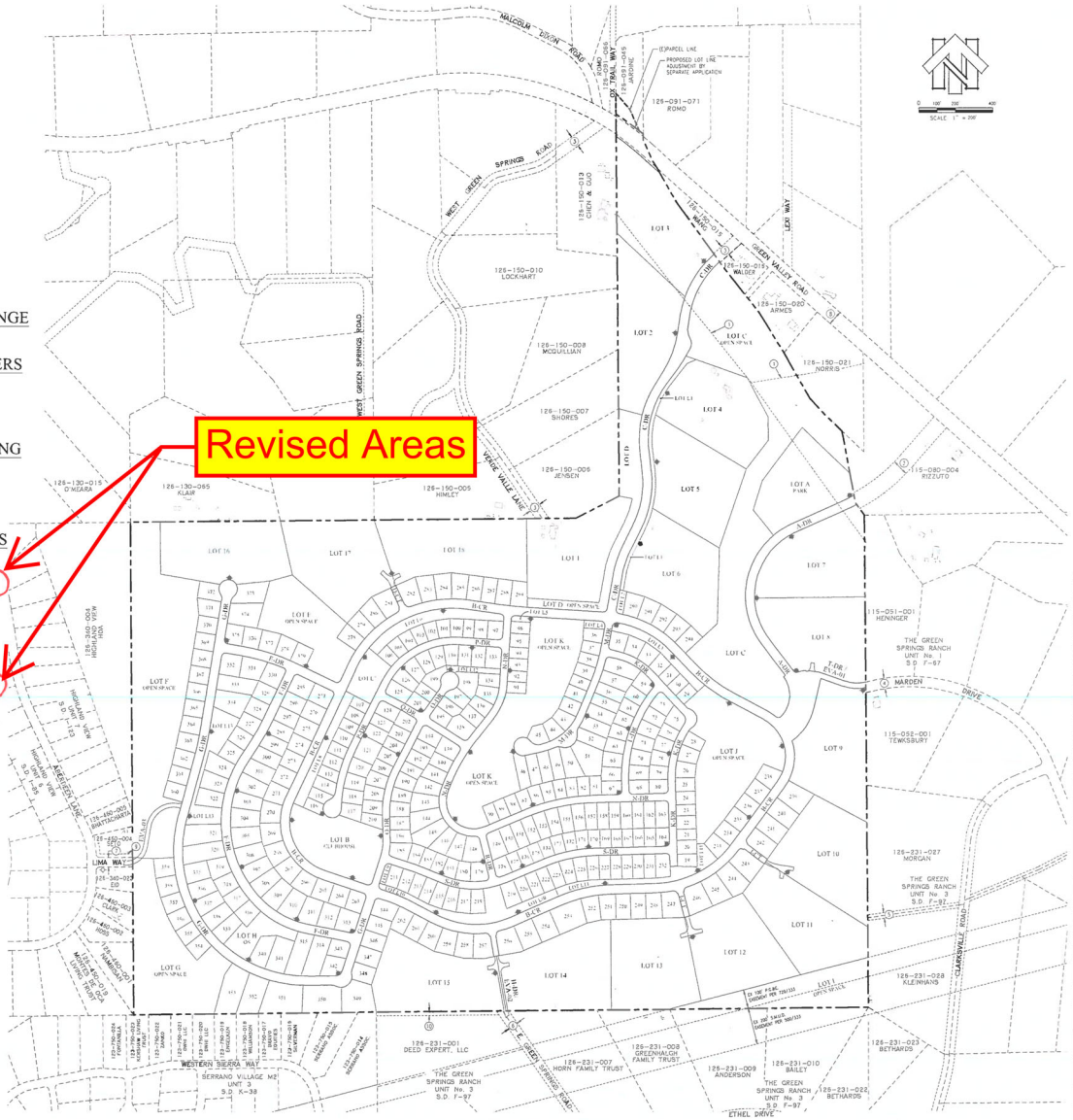


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## LEGEND

- FIRE HYDRANT
- PROJECT BOUNDARY

## KEY NOTES:

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5. (E) 30' DRAINAGE & PUBLIC UTILITY EASEMENT PER S.D. F-97
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8. (E) 80' RIGHT-OF-WAY PER 531 O.R. 15, 765 O.R. 607, 523 O.R. 34 and 536 O.R. 233
9. 20' SETBACK, SLOPE, DRAINAGE AND PUBLIC UTILITY EASEMENT PER S.D. F-92
10. (E) 20' DRAINAGE EASEMENT PER S.D. F-97

## GROSS AND NET LOT AREAS

| LOT NO. | GROSS AREA (S.F.) | NET AREA (S.F.) | ZONING |
|---|---|---|---|
| 1 | 218,573 | 159,556 | |
| 2 | 232,509 | 143,181 | |
| 3 | 248,403 | 161,086 | |
| 4 | 218,126 | 167,047 | |
| 5 | 218,481 | 163,708 | |
| 6 | 218,208 | 155,680 | |
| 7 | 218,633 | 161,187 | |
| 8 | 219,541 | 155,092 | |
| 9 | 227,881 | 159,910 | R1-5 |
| 10 | 226,910 | 167,569 | |
| 11 | 220,382 | 164,295 | |
| 12 | 217,903 | 160,242 | |
| 13 | 217,827 | 164,456 | |
| 14 | 218,047 | 152,543 | |
| 15 | 229,559 | 166,433 | |
| 16 | 218,409 | 158,831 | |
| 17 | 230,261 | 177,333 | |
| 18 | 243,565 | 178,182 | |
| 107 | 8,000 | 3,290 | R1 |
| 235 | 10,010 | 6,075 | |

NOTES:
1) LOTS 107 (AGE RESTRICTED) & 235 REPRESENT THE SMALLEST RESIDENTIAL LOTS INSIDE THE R1 ZONE. ALL OTHER RESIDENTIAL R1 ZONED LOTS ARE THE SAME SIZE OR LARGER
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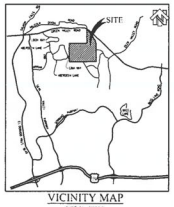
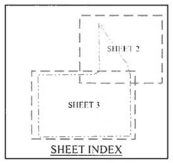



VICINITY MAP
NOT TO SCALE

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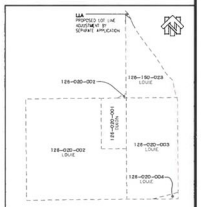
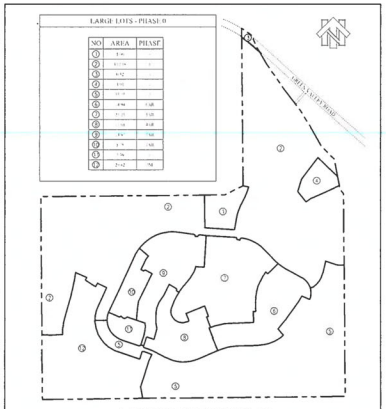



EXISTING ASSESSOR'S PARCELS
SCALE: 1" = 1000'




LARGE LOT / PHASING PLAN
SCALE: 1" = 500'

## PHASING PLAN NOTICE

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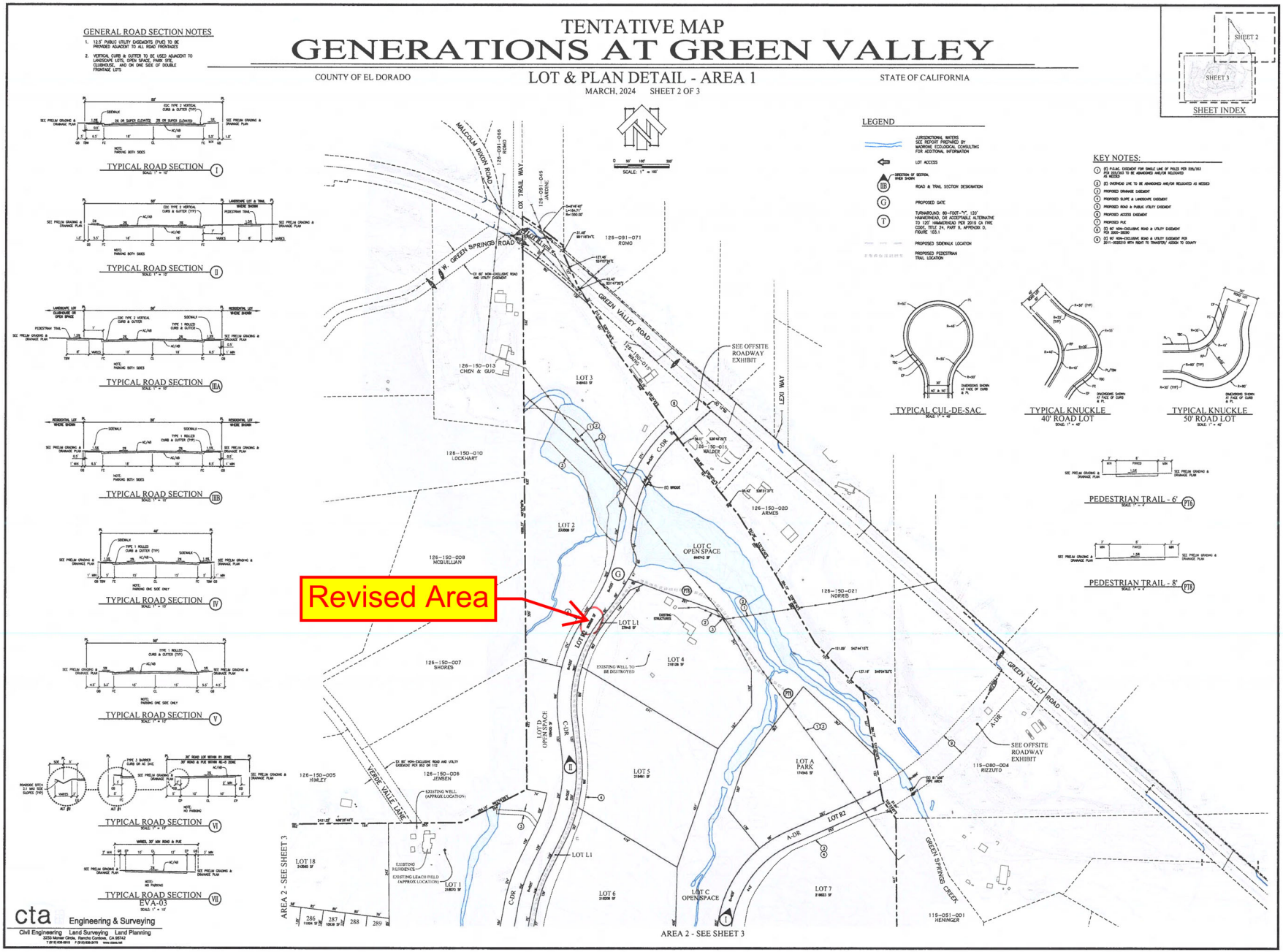
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GENERATIONS AT GREEN VALLEY
COUNTY OF EL DORADO
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PEDESTRIAN TRAIL - 6'
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Revised Area
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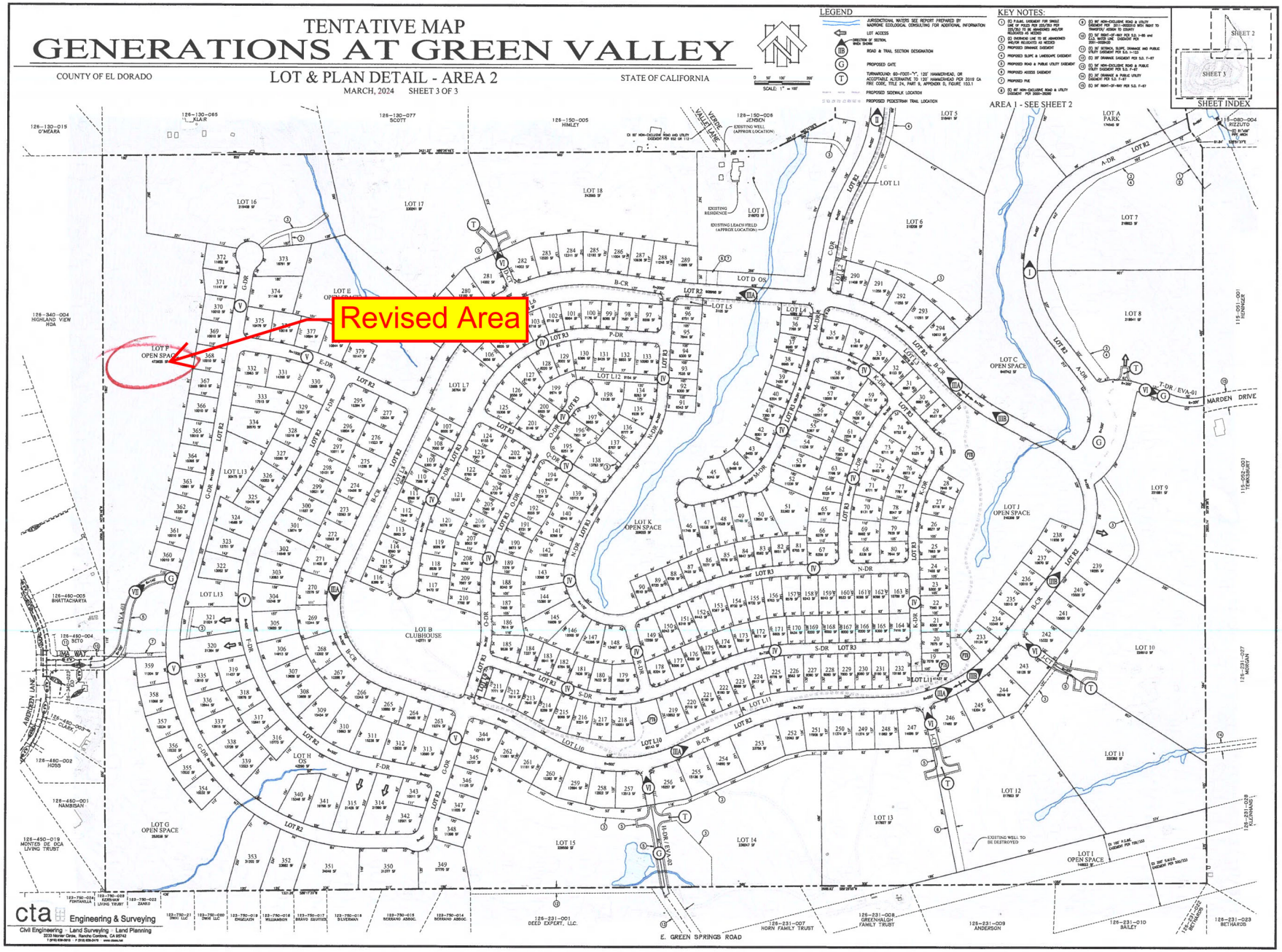
OX TRAIL WAY
W. GREEN SPRINGS ROAD
GREEN VALLEY ROAD
LEXI WAY
VERDE VALLE LANE
GREEN SPRINGS CREEK
SEE OFFSITE ROADWAY EXHIBIT
LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
LOT 6
LOT 7
LOT 18
LOT L1
LOT C OPEN SPACE
LOT D OPEN SPACE
LOT A PARK
LOT R2
AREA 2 - SEE SHEET 3
cta Engineering & Surveying
Civil Engineering Land Surveying Land Planning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GENERATIONS AT GREEN VALLEY
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MARCH, 2024 SHEET 3 OF 3
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LOT A PARK
LOT B CLUBHOUSE
LOT C OPEN SPACE
LOT G OPEN SPACE
LOT H OS
LOT I OPEN SPACE
LOT J OPEN SPACE
LOT K OPEN SPACE
MARDEN DRIVE
E. GREEN SPRINGS ROAD
cta Engineering & Surveying
Civil Engineering · Land Surveying · Land Planning

# TENTATIVE MAP
# GENERATIONS AT GREEN VALLEY

COUNTY OF EL DORADO — OVERALL LAYOUT — STATE OF CALIFORNIA

MARCH, 2024 SHEET 1 OF 3

## OWNERS OF RECORD

JENNY LOUIE HELM, WAYLAND H. LOUIE AND JEN LYNN LOUIE, SUCCESSOR TRUSTEES OF THE FAY LOUIE 2001 LIVING TRUST, ET AL.
POST OFFICE BOX 2224
BAKERSFIELD, CA 93303

ROBERT AND AMANDA PENA
AND KIMBERLY DIXON
3000 VERDE VALLE LANE
EL DORADO HILLS, CA 95762

## APPLICANT

GREEN VALLEY ROAD BENEFITS, LLC
110 BLUE RAVINE ROAD, SUITE 209
FOLSOM, CA 95630

## ENGINEER

cta Engineering & Surveying
Civil Engineering Land Surveying Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742

## MAP SCALE

1" = 200'

## CONTOUR INTERVAL

CONTOUR INTERVAL = 1' FOOT (5' FEET SHOWN)

## SOURCE OF TOPOGRAPHY

AERIAL PHOTOGRAMMETRY

## SECTION, TOWNSHIP and RANGE

SECTION 24, T.10 N., R.8 E. M.D.M.

## ASSESSOR'S PARCEL NUMBERS

A.P.N. 126-020-001
A.P.N. 126-020-002
A.P.N. 126-020-003
A.P.N. 126-020-004
A.P.N. 126-150-023

## PRESENT & PROPOSED ZONING

SEE ZONING MAP AS PART OF THIS APPLICATION

## TOTAL AREA

280.70 ACRES

## TOTAL NUMBER OF PARCELS

### RESIDENTIAL LOTS

| | |
|---|---|
| SINGLE FAMILY LOTS - 378 (214 AGE RESTRICTED) | 174.42 AC |
| EXISTING RESIDENCE (LOT1) - 1 | 5.00 AC |

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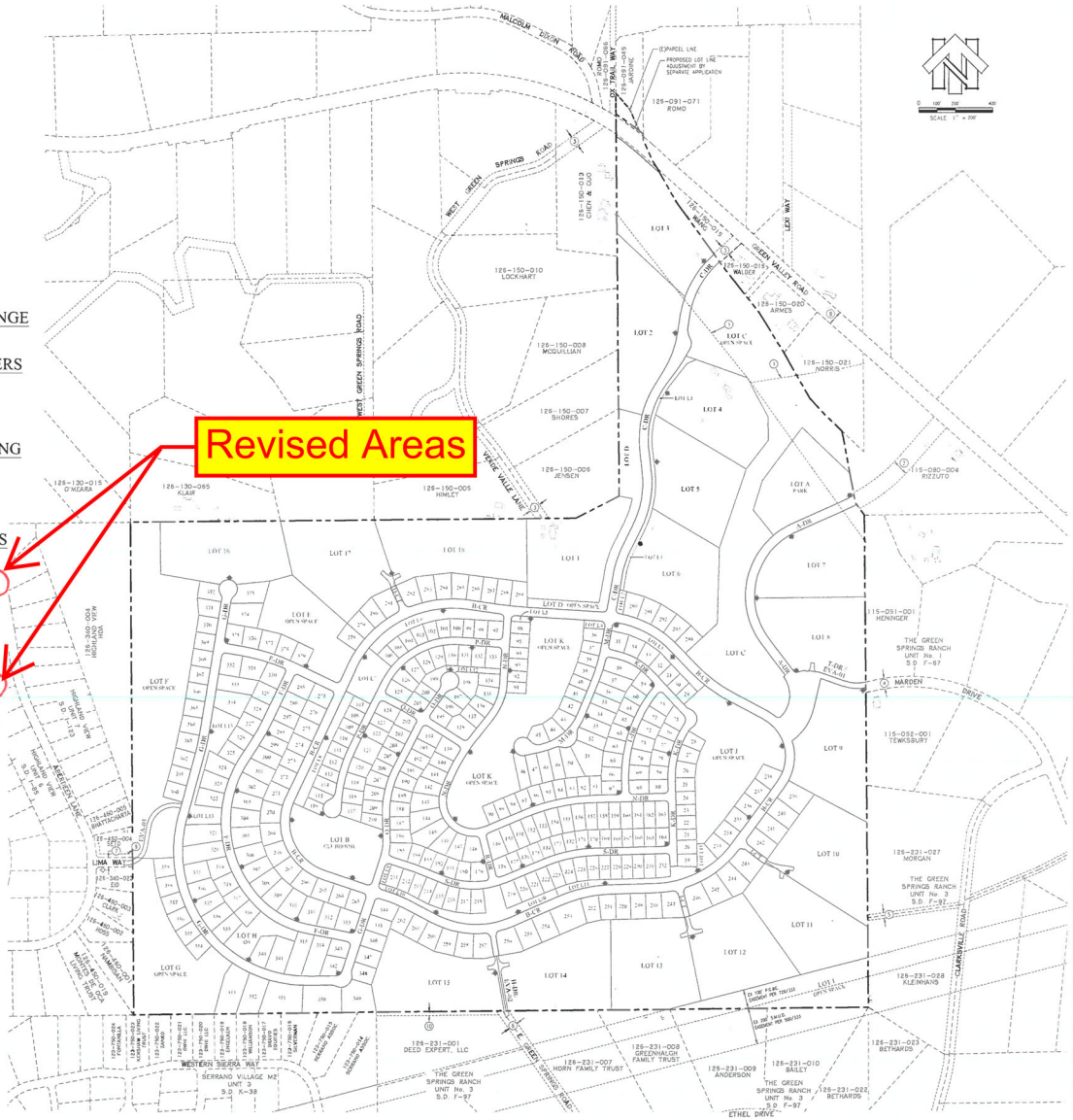


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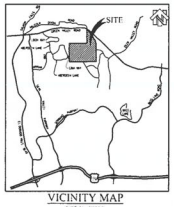


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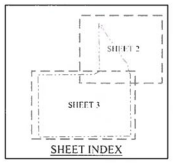


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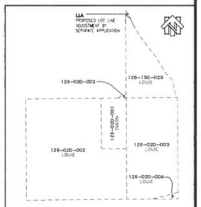


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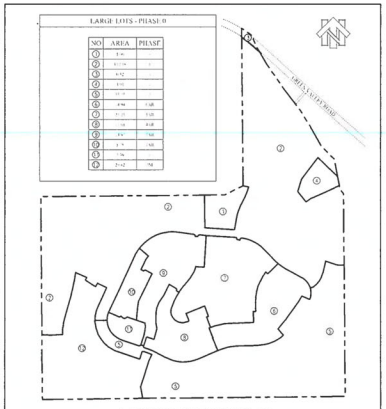


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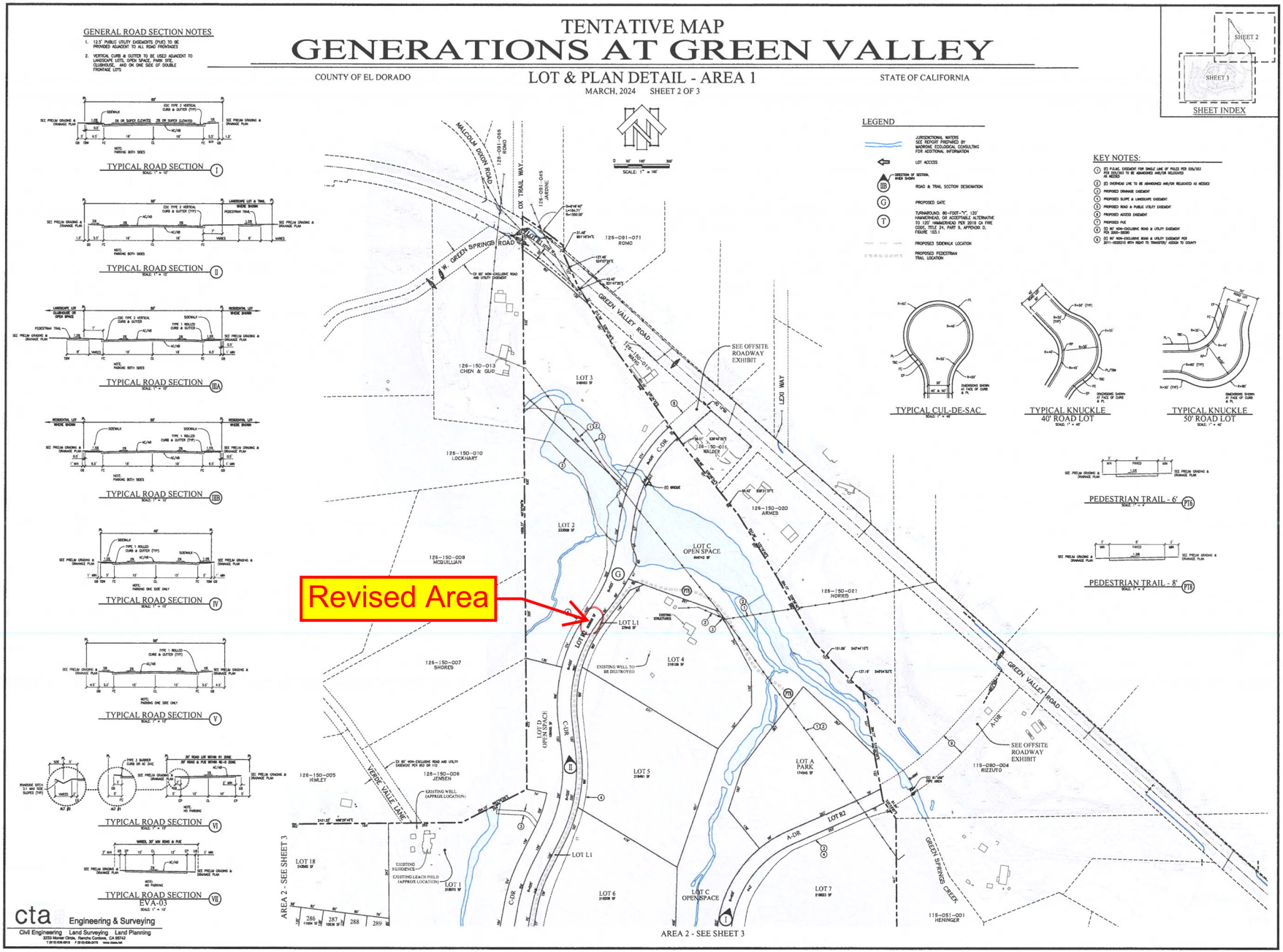
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LOT 5
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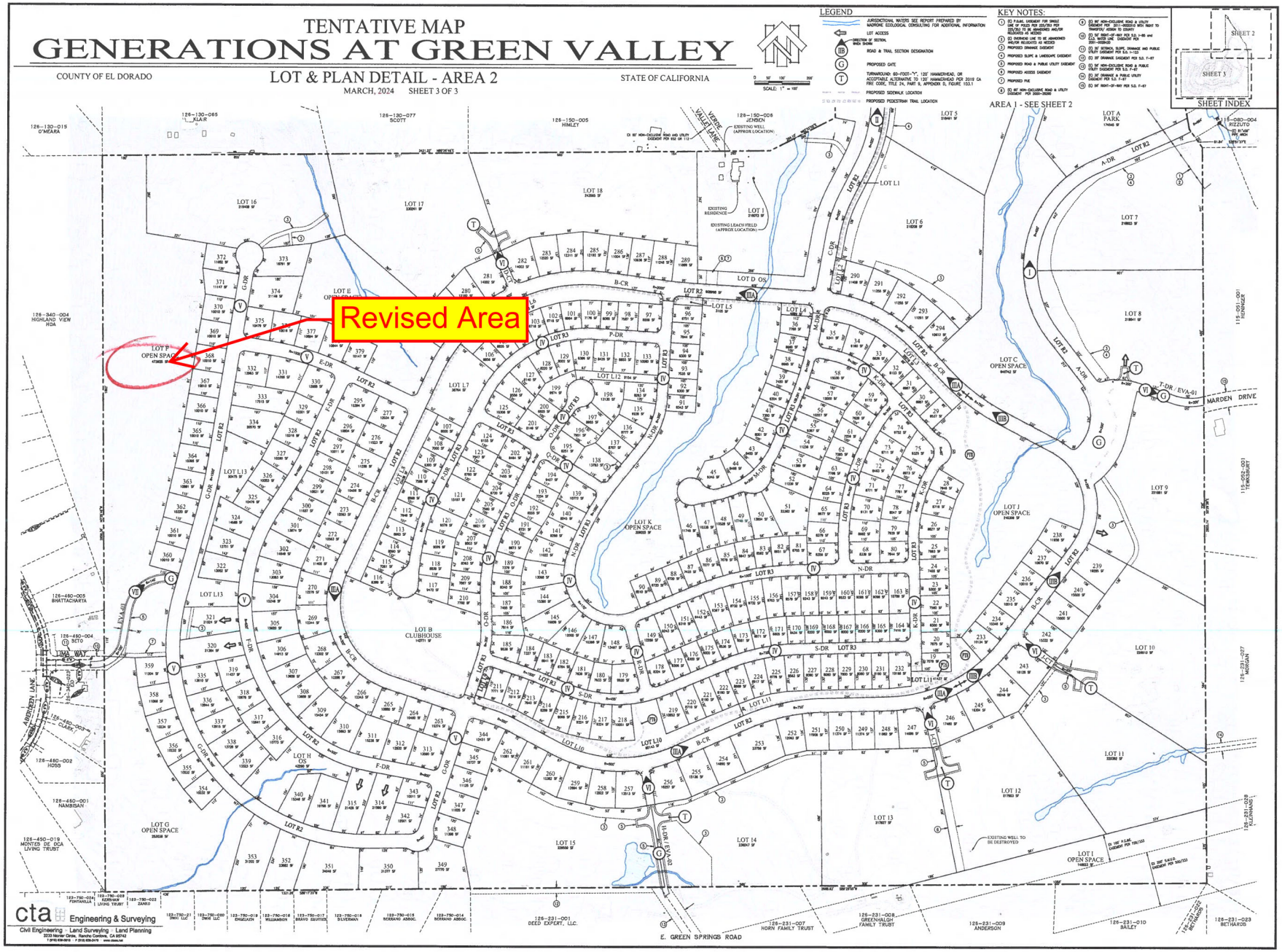
LOT C OPEN SPACE
LOT D OPEN SPACE
LOT A PARK
LOT R2
AREA 2 - SEE SHEET 3
cta Engineering & Surveying
Civil Engineering Land Surveying Land Planning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LOT J OPEN SPACE
LOT K OPEN SPACE
MARDEN DRIVE
E. GREEN SPRINGS ROAD
cta Engineering & Surveying
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# Appendix F

Storm Drainage Evaluation

November 22, 2022

# STORM DRAINAGE EVALUATION

## Generations

## Tentative Map

PREPARED FOR:

CTA Engineering & Surveying

SUBMITTED TO:

El Dorado County

PREPARED BY:

Domenichelli & Associates, Inc.

5180 Golden Foothill Parkway Suite 220, El Dorado Hills, CA 95678

PHONE (916) 933-1997



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Appendix D LID Results (Excel Worksheets)

# 1. Introduction & Overview

The Generations project encompasses approximately 280 acres, located north of US Highway 50 in El Dorado Hills, in western El Dorado County. The property is located south of Green Valley Road, near the intersection with Malcolm Dixon Road, in the Community Region of El Dorado Hills. Two points of access to the project are proposed at Green Valley Road. Existing or approved adjacent subdivisions include Green Springs Ranch to the east and southeast, Serrano to the southwest, and Highland View to the west.

## 1.1. Purpose

The purpose of the report is to provide hydrologic and hydraulic analyses in support of storm drainage improvements shown on the tentative map application for the Generations development, and to verify adherence with guidelines and procedures outlined in the County of El Dorado *Drainage Manual*.

## 1.2. Previous Studies

No previously approved study was used in the development of this study. Hydrology and Hydraulic modeling were previously performed for Green Springs Creek which was used as a reference for the modeling in this study.

## 1.3. Topography

The project site generally slopes from South to North and East to West and is characterized by mostly grassland with scattered oak trees. Green Springs Creek flows from East to West through the Northern portion of the site, roughly paralleling Green Valley Road. Two existing man-made ponds are located within the project area, within the Green Springs Creek alignment.

The Generations development utilizes topography flown in 2011 and is based on the North American Vertical Datum of 1988 (NAVD88). A supplemental field survey was performed in 2012 at each of the two ponds. The hydrologic modeling for the Generations project extends beyond the scope of this topography. For areas outside of the flown topography digitized USGS quad maps are used.

# 2. Project Description

The Generations project includes a proposal for 379 new residential units, a clubhouse, a park, and the supporting improvements required to serve the development. In addition to standard drainage features typically associated with development, two existing drainage ponds will be modified with the development. Two road crossings of Green Springs Creek will be sized to maintain freeboard and flow criteria for the creek. On-site, several detention basins will be constructed which will reduce runoff potential from developed areas to re-create existing flow conditions for the 2-year, 10-year and 100-year 24-hour events.

The onsite development will include several basins which will mitigate the runoff peaks generated due to development. In addition to mitigating offsite flow, flows will also be mitigated at key discharge points onsite to maintain flow to wetland areas and prevent scouring.

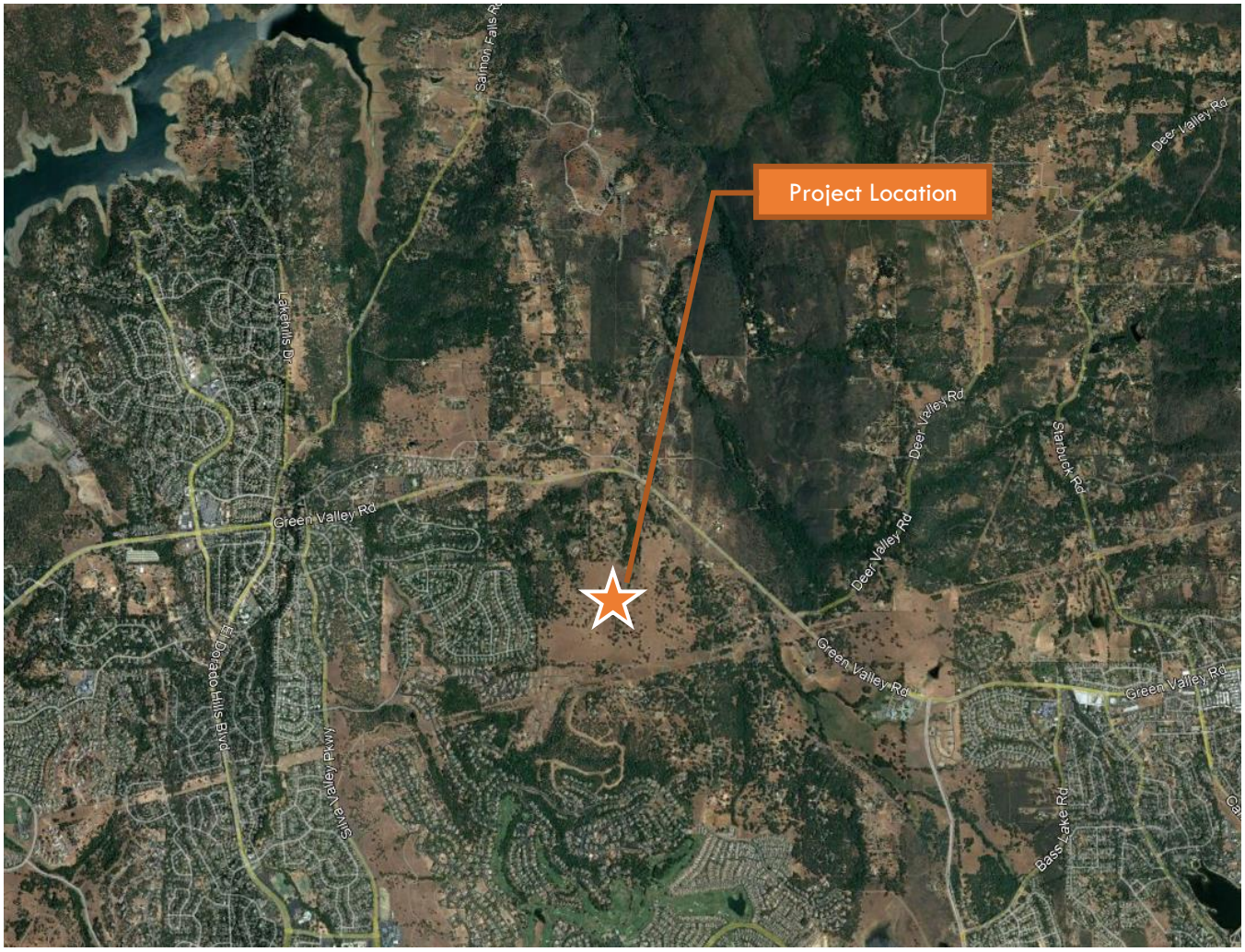


Figure 1. Generations Location Map

# 3. Modeling Parameters

The drainage study for the Generation project was carried out in conformance with the guidelines and procedures of the *County of El Dorado Drainage Manual*, adopted March 14, 1995, and adopted September 22, 2020, with precipitation data as revised in 2008.

The analysis of the hydrology was performed in HEC-HMS version 4.8. The hydraulic analysis of Green Springs Creek was created in HEC-RAS version 5.0.7.

## 3.1. Hydrologic Parameters

### Existing Watershed Conditions

The existing watersheds used in this study are based on aerial topography and quad maps to determine compliance locations at various points in the project vicinity. Watershed maps and key points in the runoff analyses are provided in Exhibits 1, 1A and 1B.

As shown on the Exhibit 1.1 and Exhibit 1.2 in Appendix A, site runoff contributes to several drainage networks that ultimately tributary to Folsom Lake via New York Creek. The existing upstream shed contributing to Green Springs

Creek is 2.6 square miles and is the primary source of runoff which flows through the site via Green Springs Creek. The flow in Green Springs Creek is significant and mitigation is an important factor to consider in post-development conditions.

In most cases, watersheds were delineated based on the project boundary in order to provide a hydrograph at the project boundary for comparison purposes. Watersheds extend slightly into neighboring properties to capture the full extent of the on-site development. There is no proposed development outside of the project area except for access, and therefore, for the purposes of a comparison to developed conditions hydrographs, the resultant flow is considered the project boundary flow. Figure 2 shows a pre and post watershed and the associated compliance point.

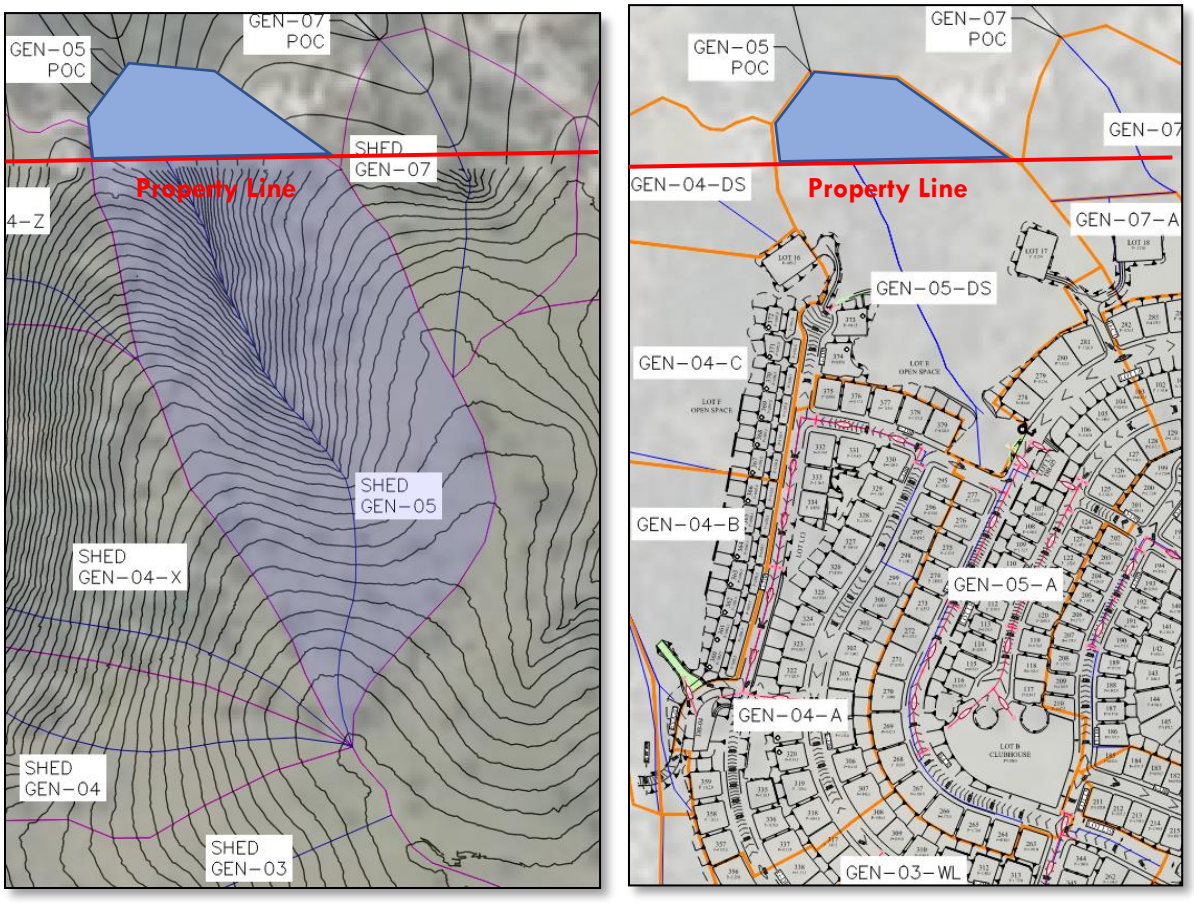


Figure 2. Pre and Post Watersheds Showing Same Off-Site Conditions

## Proposed Watershed Conditions

Proposed conditions watersheds share the same external boundary as the Existing conditions watersheds. However, they were broken up into smaller sub-sheds based on the on-site design. Some on-site watersheds drain to a detention basin while other sheds are undisturbed and drain directly off-site. Watersheds are named based on their associated discharge location. For example, all GEN-05 watersheds in developed conditions eventually drain to the GEN-05 point of compliance which allows for a comparison to the existing conditions watershed at the same location.

## Precipitation

The hydrograph method of runoff computation was used to evaluate project impacts on downstream facilities, wetlands, and the effectiveness of proposed mitigation measures. Throughout this study, the 50%, 10%, and 1%

reoccurrence interval storm events will be referred to as the 2-year, 10-year, and 100-year storm events. 24-hour duration hydrographs were produced for the 2-year, 10-year and 100-year storm events in HEC-HMS to identify and mitigate the impact of development. The Generations project's upstream sheds fall between the 26" and 28" mean annual precipitation contours and the generations subdivision is near the 26" contour as seen in Exhibit 3. The 27" mean annual precipitation values were chosen for the design storms and are shown in Table A2.2.1 in Appendix B. The generations project sits at an elevation ranging from 1000-1250ft, with the large upstream watershed having a maximum elevation of 1465ft. Since all elevations are lower than 1,640ft, in accordance with the County of El Dorado Drainage Manual, a type 1 temporal distribution was used for all design storms.

## Runoff Calculations

To determine the hydrographs for each watershed, HEC-HMS was used to evaluate the watersheds based on SCS TR-55. An accompanying excel spreadsheet has been provided in Appendix B to identify the key parameters which include area, composite curve number, impervious percentage, lag time and reach characteristics. The initial abstraction was set to zero for all watersheds, assuming that the sheds would be saturated prior to the 24-hour peak. Since the soil types are a mix of C and D type soils, preceding events have the potential to produce these saturated conditions.

## Curve Numbers and Soil Type

Composite curve numbers were calculated using google earth imagery and the tentative map layout to determine the weighted areas for each land use category. Soil type for the Generations onsite watersheds was determined to be D-Type soil and for the larger 2.6 square mile watershed the soil type was determined to be C-Type soil. Exhibit 4 in Appendix A shows the soil classifications from the USDA. Using the soil type and land use, curve numbers for each of the land use regions were determined using TR-55 and a spatially weighted average CN was computed for each watershed. The values used are highlighted on Table 2-2c in Appendix B. Generally speaking, due to the D-type soil found on-site, the pre-conditions CN values do not dramatically raise in the post-construction conditions. As D-type soil already has a low infiltration rate, the added impervious to the site does not significantly alter the runoff potential.

## Lag time

Lag time was determined using the TR-55 manual and a characteristic water course lengths for each watershed. Sheet flow travel time was determined using the simplified solution to the kinematic-wave equations, shallow flow velocity was determined using Figure 3.1 of TR-55, and channel flow velocity was estimate using Manning's equation with typical n value, A/P ratio, and slope for the given channel. The travel time for each watercourse length was determined and the lag time was taken to be 60% of the total travel time for each shed. A summary of the calculations is presented in Appendix B.

## Stream Flow Routing

In HEC-HMS, Muskingum-Cunge routing models were used for concentrated flow routing. Muskingum-Cunge is best suited for applications where timing is the key element of interest and storage volume can be ignored. The stream systems in question are all moderately steep and therefore limited storage will take place in the streams except at dedicated storage areas. Due to this, Muskingum-Cunge routing was picked as the preferred method. These routes were determined where sub catchments combined to flow through low flow channels and streams. The HEC-HMS input and routing are shown in Appendix B.

## Detention

Peak flows are increased due to onsite development and need to be mitigated to maintain the existing condition flows for flood control and hydromodification mitigation. Through iteration, detention basins were sized, and outfall structures were designed to retain flows similar to, but not greater than, the existing peak flows at several key locations throughout the site for the 2-year (Hydromod), 10-year (Flood Control), and 100-year (Flood Control)

storm events. A typical basin will contain a low-flow orifice, an overflow weir, and an emergency spillway sized to convey the 100-year event while maintaining 1.5 ft of freeboard in the basin.

Final design of the detention basins will be determined with improvement plan design submittal and final drainage report.

## 3.2. Hydraulic Parameters

### Hydrographs

Hydrographs were taken from the runoff computations in HEC-HMS and inserted into the HEC-RAS model as lateral inflow or uniform later inflow conditions. The primary flow contribution to the model comes from the 2.6 square mile shed to the east of the Generations project site. Due to the steep nature of Green Springs Creek, hydrographs were added with minimum flows approximately 10% of the peak inflow to the model. This minimum flow helped to prevent instabilities throughout the model during the ramp up and trailing end of the flows. They do not have an impact on peak flow results.

### Base Flow

Due to the relatively steep nature of the Generations site, baseflows for on-site hydrographs were assumed negligible for channelized flow. However, for Green Springs Creek baseflows were assumed to be approximately 5% of the peak discharge from the upstream shed for 100-year and 10-year storms and 10% for the 2-year storm. These assumptions provide HEC-RAS model stability at low-flows and pre-fill any low-flow storage that may occur in the creek.

### Manning's 'n' Values

Green Springs Creek's main channel is generally a clean winding channel with some pools, shoals, weeds, and stones. The section of GSC near the downstream property line has additional ineffective slopes and sections with heavier weeds and stones. These two conditions result in Manning's n values of 0.045 and 0.055 respectively. The overbank floodplains of GSC were given 3 characteristic values. The first was 0.05 which is typical for light brush and trees in winter. The second was 0.04 which is typical of cleared land with tree stumps, no sprouts and the third was 0.1 representing heavy stand of timber, a few down trees, little undergrowth with flood stage below branches.

To determine routing within HEC-HMS a Manning's n value of 0.06 was used for all routing. This value is higher than that used in for the creek itself because stages are expected to be lower in the elements modeled in HEC-HMS. A value of 0.06 considers the added impact of grasses on the flow and will results in a slightly reduced velocity, which would be expected in the grassy, low flow channels.

### Downstream Boundary Condition

The downstream boundary condition was set to normal depth with a characteristic slope taken from the HEC-RAS terrain in the Green Springs Creek channel.

### Green Springs Creek Existing Conditions

The existing conditions in Green Springs Creek were modeled in HEC-RAS to determine existing flows and water surface elevations throughout the project reach. Currently, there are two permanent water ponds in the project reach with high-elevation bypasses. The embankments for both of these ponds are overtopped during a 100-year event. Each pond's bypass can handle small storms, up to the 2-year storm, but larger events use the embankments to weir flow.

Additionally, there is a small culvert crossing at the upstream boundary of the Generations project site. To determine the upstream water surface elevations for the existing conditions this crossing and culvert were omitted from the model. This results in a reduced water surface elevation which is more conservative for the purpose of comparing upstream water surface elevations to ensure the upstream property is not impacted by the proposed development.

### Green Springs Creek Proposed Conditions

The proposed conditions in Green Spring Creek maintain largely the same geometry with a few exceptions. First, both ponds are removed by providing culverts through the embankments or removing the embankment entirely. Second, the upstream culvert crossing was removed and replaced with large Conspan crossings which re-shape the bottom of the channel within the right-of-way. Third, minor overbank grading is proposed for the project site. This grading has little impact on the cross-sectional area of the creek.

Due to the removal of the two ponds, proposed features are recommended to replace the floodplain storage. The downstream pond embankment is removed entirely, and the channel restored to its approximate natural state. The upstream embankment now an access road to the site and an upstream flow-control structure is planned which will recreate the 2-year, 10-year, and 100-year storage of the two existing ponds. An additional road crossing will be added near the upstream boundary of the site but that crossing is anticipated to provide no storage.

The locations and criteria for comparison between the existing and proposed models are as follows:

- Downstream hydrographs for all events
- 100-Year water surface elevations at any location where the WSEs extend beyond the property line
- Upstream water surface elevation at the upstream property line for all events

To recreate downstream peak flows leaving the site, detention within the onsite reach of Green Springs Creek was studied at each of the road crossings. However, the upstream most crossing must not impede flows due to its proximity to the upstream property. Therefore, the detention must occur at the new Green Springs Creek road crossing near the existing ponds.

The road crossing has significant storage capacity on the upstream side due to the existing pond geometry in the undeveloped conditions. The proposed CON/SPAN must be adequately sized to rule out the possibility of plugging during a major storm event. To achieve the desired results, a weir structure was modeled upstream of the CON/SPAN as part of the wingwall structure with two low flow orifices to pass frequent storm events and maintain the low flow channel. The crossing was designed in such a way that if, in the unlikely event that the CON/SPAN is plugged, that the overtopping of the road will not result in ponded water surface elevations to the elevation of any nearby structure.

# 4. Modeling Results

## 4.1. HEC-HMS Model

Using the parameters discussed above, a HEC-HMS model was created for the pre-conditions and post-conditions site. Using the model and an iterative approach, detention basins were sized at each watershed which required mitigation and an outlet structure was proposed to meter the flows for the 2-year, 10-year, and 100-year storm events. Twelve critical points (also referred to as points of compliance) are shown on Exhibit 1.1 and Exhibit 2 in Appendix A for the pre and post conditions. As discussed, these critical points are all at the project boundary. Tables 1.1 and 1.2 show the pre and post conditions flows for the 100-year event at each critical point. Full results for all storms can be found in Appendix B. Values from HEC-RAS model (US-POND and GSP-POC) are included in the tables below. The HEC-RAS model will be discussed further in section 4.2. The flow presented for US-POND is for the cross section upstream of the eastern most crossing of GSP (HEC-RAS Station 3441.5) and it represents the flow change as a result of improving the crossing to a pair of CON/SPAN culverts. The flow presented in GSP-POC is at the downstream most end of the model (HEC-RAS Station 10. It is downstream of the property line and shows that there are no negative off-site impacts as a result of the development.

Table 1.1: Pre and Post Conditions Peak Flows at Critical Points.

| 100YR | GEN-01-POC | GEN-02-POC | GEN-03-POC | GEN-04-DS-POC | GEN-04-US POC | GEN-05-POC |
|---|---|---|---|---|---|---|
| Existing | 73.4 | 55.3 | 53.3 | 107.4 | 21.6 | 58.0 |
| Proposed | 66.8 | 52.8 | 36.8 | 97.7 | 16.3 | 55.3 |
| Reduction | 91.0% | 95.5% | 69.0% | 91.0% | 75.5% | 95.3% |

Table 1.2: Pre and Post Conditions Peak Flows at Critical Points.

| 100YR | GEN-06-POC | GEN-07-POC | GEN-08-POC | GEN-11-POC | GEN-12-POC | US-POND | GSP-POC |
|---|---|---|---|---|---|---|---|
| Existing | 97.7 | 27.7 | 58.3 | 1883.2 | 1878.2 | 1883.7 | 2040.7 |
| Proposed | 75.6 | 26.7 | 48.4 | 1881.0 | 1876.5 | 1881.4 | 1950.7 |
| Reduction | 77.4% | 96.4% | 83.0% | 99.9% | 99.9% | 99.9% | 95.6% |

In all cases, the proposed conditions 100-year storm event is reduced below the existing conditions storm event at the property boundary. Since Gen-03 and Gen-04 drain to adjacent development the reduction in these watersheds is conservatively proposed to ensure no adverse impacts downstream. If, during improvement plan development, additional detail at these locations is available for analysis, the mitigation required may be reduced to achieve flows similar to the existing conditions flows.

The reductions in flow at the property boundary are achieved primarily by use of detention basins. Seven detention basins are proposed on-site to mitigate peak flows. Each basin and outlet structure is sized to not use the emergency spillway during the 100-year event under normal operations. If the outlet of the basin becomes plugged, the emergency spillway is designed to pass the 100-year event while maintaining 1.5 ft of freeboard to the basin top. Table 2 below list the peak 100-year water surface elevations during normal basin operations and elevations of the spillway and basin top. The "100-year Freeboard to Emergency Spillway" column represents the distance from the peak 100-year WSE during normal operation to the emergency spillway elevation.

Table 2: Detention Basin Results in NAVD88.

| | PEAK 100-YR WSE | EMERGENCY SPILLWAY ELEV | BASIN TOP | 100-YEAR FREEBOARD TO EMERGENCY SPILLWAY (FT) |
|---|---|---|---|---|
| BASIN 1 | 1182.1 | 1183.0 | 1185 | 0.9 |
| BASIN 3 | 1090.8 | 1093.0 | 1095 | 2.2 |
| BASIN 4 | 1087.2 | 1088.3* | 1090.3 | 1.1 |
| BASIN 5 | 1118.7 | 1118.8* | 1120.8 | 0.1 |
| BASIN 6A | 1102.4 | 1103.0 | 1107 | 0.6 |
| BASIN 6B | 1149.2 | 1150.0 | 1152 | 0.8 |
| BASIN 8 | 1133.6 | 1135.0 | 1137 | 1.4 |

*Basin 4 and Basin 5 emergency spillways are non-typical, draining into the adjacent road and down the road embankment. Flow path is rock lined, acting as a spillway.

Full HEC-HMS global summaries are included in Appendix B. The results indicate that proposed development of the Generations Project Site does not increase peak runoff at the key points for design storms under consideration.

## 4.2. HEC-RAS Model

In addition to the HEC-HMS model provided to size features to serve the bulk of the site, the HEC-RAS model is needed to show compliance in Green Springs Creek. An existing conditions and proposed conditions geometry was created to model the difference between pre and post conditions. In addition to the geometric changes to the channel, post-development hydrographs were entered into the post-conditions HEC-RAS model. By doing so, all development impacts are accounted for, and mitigation can be sized accordingly. Factors looked at for post-project mitigation are the peak flows at the downstream property limit and the water surface elevations throughout the channel reach (including the resultant upstream water surface elevation).

Timing of the peak flows was studied to determine if the model required extension downstream. If the peak flow in GSP was reduced, but the timing of the peak changed substantially, it may result in coincidence with New York Creek prior to discharge into Folsom Lake. The modeling shows that the peak flow of the proposed condition occurs at a time where the peak flow of the existing condition hydrograph remains greater than the proposed. So, although the peak will shift slightly later in developed conditions, the peak flow will remain below the existing flow even at the later time. This can be seen visually in Figure 3.

Compliance on the downstream section is determined by the flow hydrographs for Green Springs Creek leaving the project area. In the existing conditions, the 100-year and 10-year events overtop the existing pond embankments and flow continues downstream unrestricted. The removal of the downstream embankment to maintain a low flow channel makes the 2-year event an important factor when analyzing the downstream boundary condition for compliance. HEC-RAS resulting hydrographs for the downstream cross section at W Green Springs Rd are provided in Appendix C. Figure 3 also shows these hydrographs. These hydrographs show that the peak outflow has been reduced for storm events analyzed in this study.

Removal of the downstream embankment to maintain a low flow channel through Green Springs Creek, without added mitigation, results in increased flow during smaller storm events as mentioned previously. To maintain compliance at low flow conditions the downstream CON/SPAN requires a control structure to meter flows downstream across a range of storm events. A concept level render of the control structure can be found in Appendix C that shows the WSEs at the control structure for the analyzed storm events.

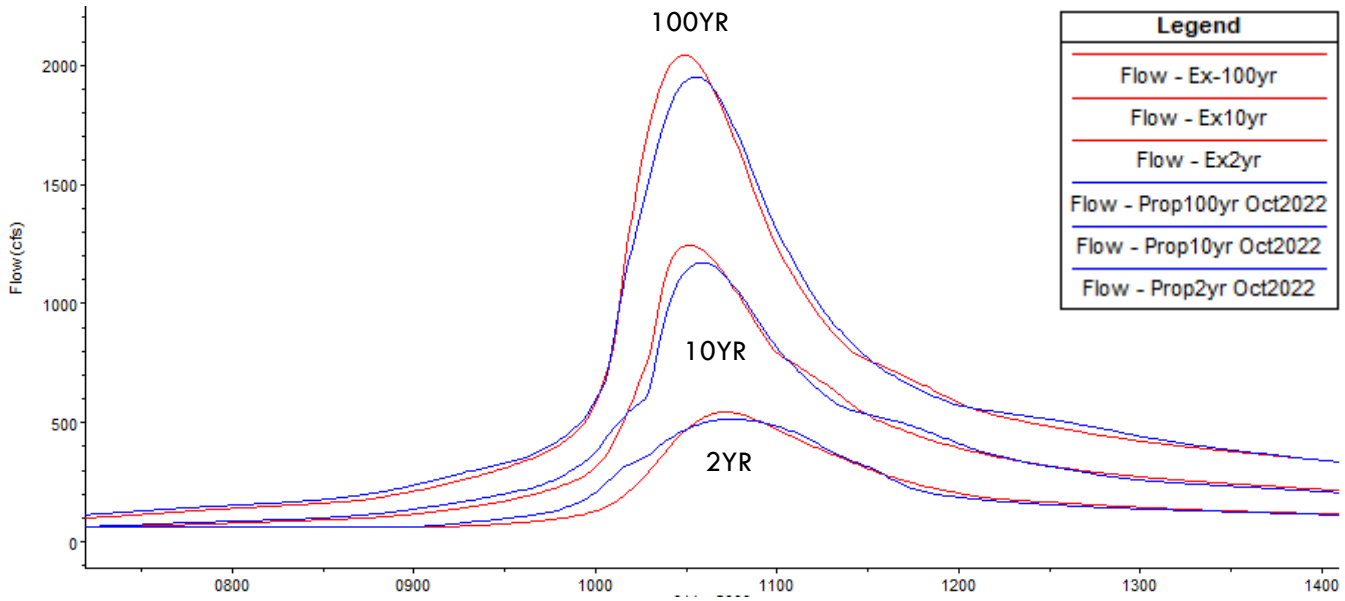


Figure 3. Green Springs Creek Hydrographs at Downstream Property Line

Compliance throughout the project reach and at the upstream boundary condition is determined by resulting water surface elevations. The upstream road crossing is near the property line which requires the CON/SPAN to be sufficiently large to maintain the existing floodplain limits across the property boundary. Several cross sections upstream of the property boundary are included to show the effects of the road crossing on the upstream property and can be seen in the profiles included in Appendix D. The results show that the WSEs are lower throughout the project reach with maximum increases in WSE of 0.1ft for the 100-year storm event. Any increase or decrease in WSE of 0.1ft or less is considered negligible and is within the computational accuracy of the model, often a result of the sensitivity of the calculations rather than a meaningful change to the flow or cross-sectional area.

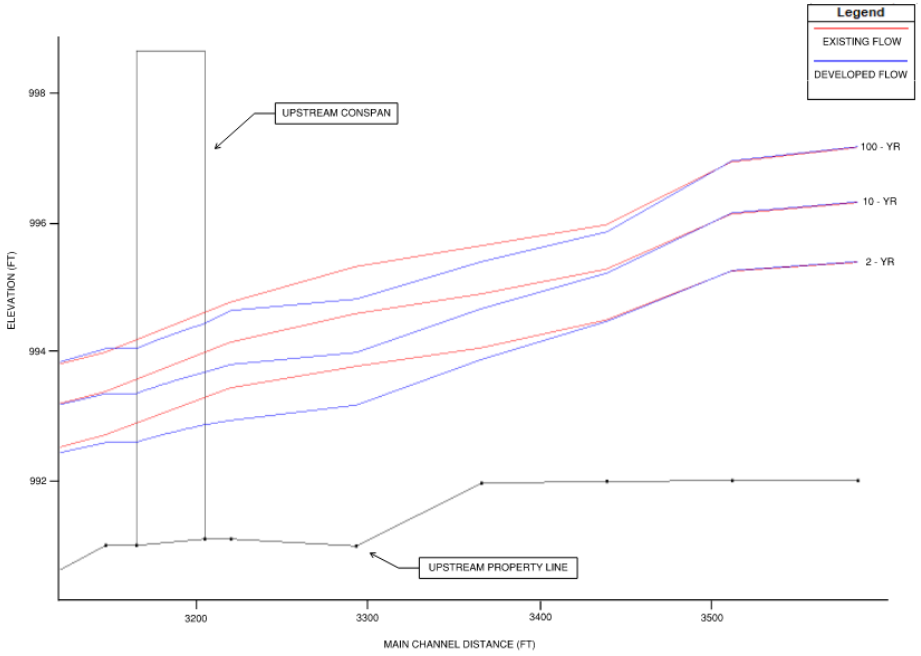


Figure 4. Green Springs Creek Upstream WSEs

Full HEC-RAS results are provided in Appendix C.

## 5. Hydromodification Mitigation

Hydromodification mitigation is provided to the satisfaction of the State Water Resources Quality Control Board MS4 Section E.12.f.ii.a. The post-project runoff shall not exceed estimated pre-project flow rates for the 2-year, 24-hour storm event. By establishing mitigation for the 2-year event in both the HEC-HMS model and HEC-RAS model the project has adequately satisfied the intent of the permit.

## 6. Low Impact Development

The Generations project is subject to low impact development (LID) standards per the El Dorado County West Slope Development and Redevelopment Standards and Post Construction Storm Water Plan Requirements. The development provides for LID on-site through bioretention basins which are either a part of a detention basin or built adjacent to the detention basin. The site also contains disconnected pavement and open space which provides for additional LID credit but are not considered in the sizing calculations. If, during improvement plan implementation, additional on-lot LID facilities are planned, the size of the bioretention basins can be reduced. Full LID credit will be achieved on-site through these features.

The tool provided on the El Dorado County website was used to create a template calculator for El Dorado County in Excel. Using the online tool, the following shared parameters were established for all LID facility sizing:

- Climate Station: Placerville
- Saturated Hydraulic Conductivity: 0.03 in/hr
- Impervious Area: Varies by shed
- Design Storm: 1.13 inches

Using the parameters above, a calculation was done for each watershed to determine the required size of any LID BMP type to treat the watershed. Appendix D contains the results of the calculations. On-site facilities are provided that meet the minimum sizing required for full LID credit.

# 7. Conclusion

The results of the analysis performed for this Technical Memorandum demonstrate that the proposed Generations development 2-year, 10-year, 100-year flows can be satisfactorily conveyed and mitigated within the proposed drainage facilities. The on-site storm drain system is not modeled in this TM since there is no off-site or regional storm drain system proposed and the on-site drainage system will be refined and calculated with the improvement plans. All detention facilities required to mitigate for on-site increase in impervious composition are calculated in this study in addition to facilities intended to recreate the lost floodplain storage in the creek. The in-line control structure in Green Springs Creek re-creates both the volume and conveyance necessary to allow the creek to pass the storm events similar to the existing conditions but without the overtopping of embankments or roads. Post-development peak flows are mitigated below pre-project conditions and the 100-year water surface elevations in the creek are below the existing elevations. HEC-HMS and HEC-RAS models are provided for review with this Technical Memorandum.

# Appendix A: Exhibits

Exhibit 1.0: Overall Shed Map

Exhibit 1.1: Existing Shed Map

Exhibit 2: Developed Shed Map

Exhibit 3: Hydraulic Routing Map

Exhibit 4: USDA Soil Map

Exhibit 5: FEMA FIRM

Exhibit 6: 100-year Flood Limits




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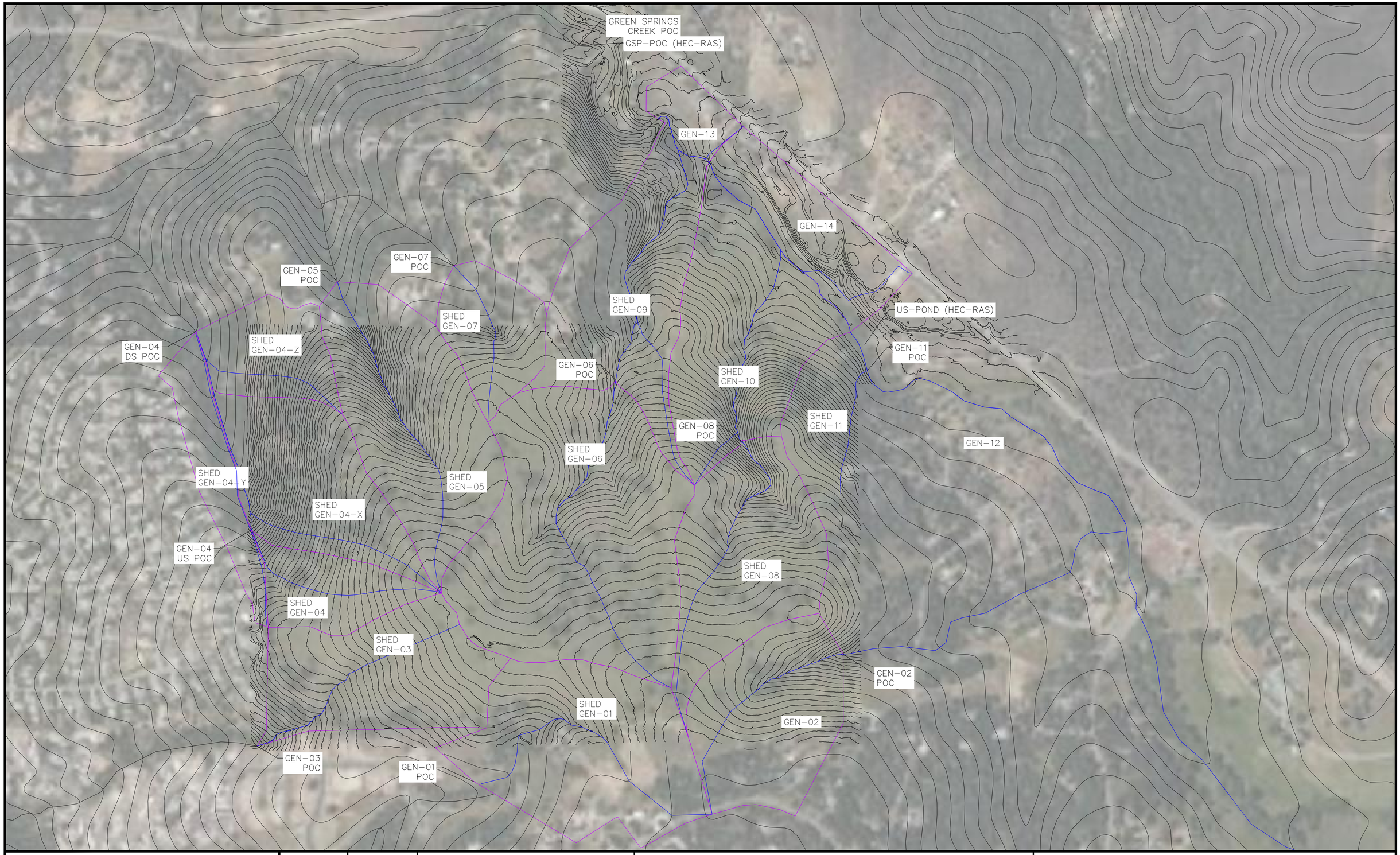
|---|---|---|---|---|---|
| | SCALE: 1:750 | WARNING 0 1/2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE. | DOMENICHELLI & ASSOCIATES<br>5180 Golden Foothill Prkwy, Suite 220<br>El Dorado Hills, CA 95762<br>Ph: (916) 933-1997<br>Fax: (916) 933-4778 | EXHIBIT 1.0 - OVERALL SHED MAP | GENERATIONS<br>November 2022 |

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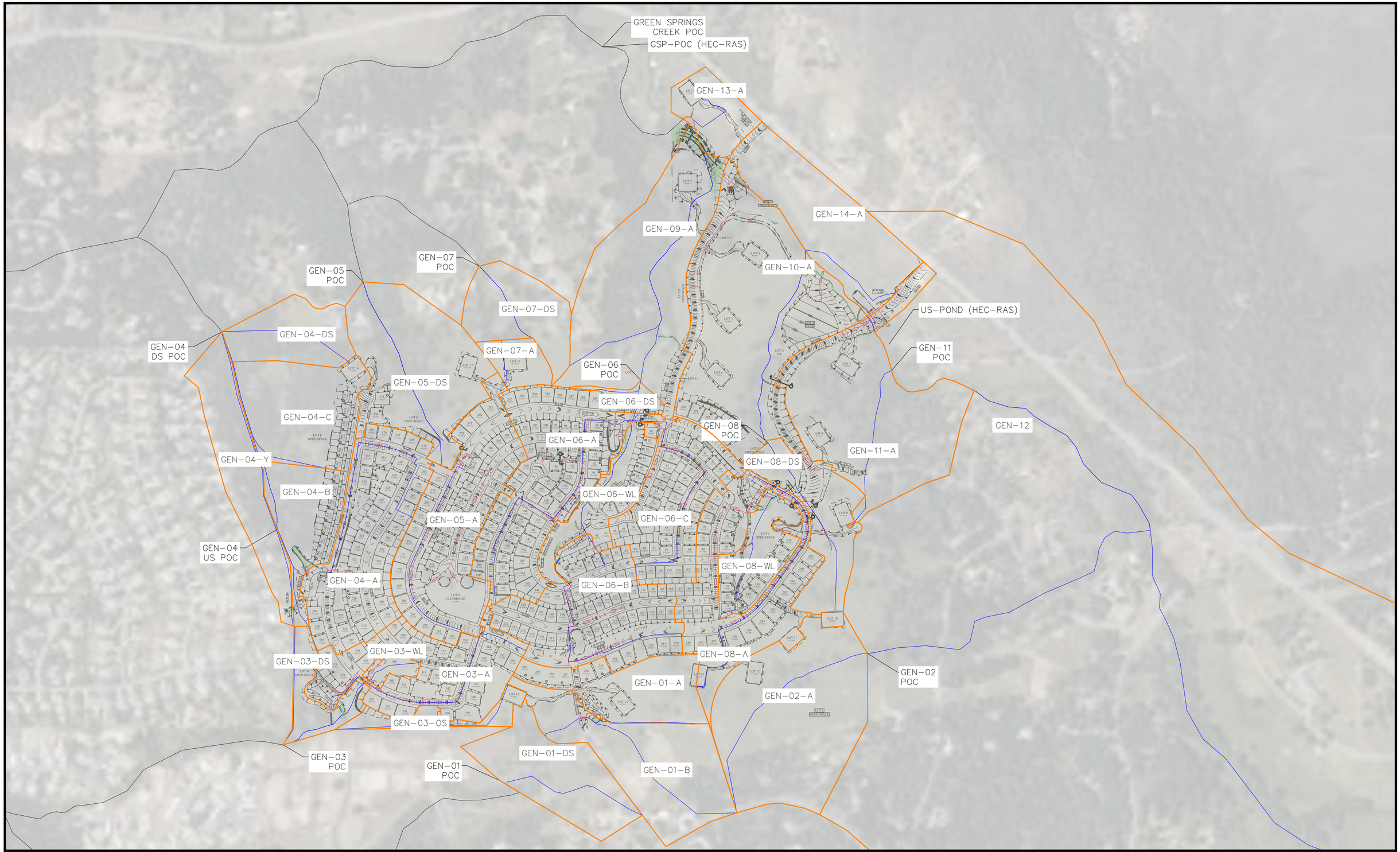
| | SCALE: 1:300 | WARNING 0 1/2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE. | DOMENICHELLI & ASSOCIATES<br>5180 Golden Foothill Prkwy, Suite 220<br>El Dorado Hills, CA 95762<br>Ph: (916) 933-1997<br>Fax: (916) 933-4778 | EXHIBIT 1.1 - EXISTING SHED MAP | GENERATIONS<br>November 2022 |

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|---|---|---|---|---|---|
| | SCALE: 1:300 | WARNING 0 1/2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE. | **DOMENICHELLI & ASSOCIATES** 5180 Golden Foothill Prkwy, Suite 220 El Dorado Hills, CA 95762 Ph: (916) 933–1997 Fax: (916) 933–4778 | EXHIBIT 2 - DEVELOPED SHED MAP | GENERATIONS November 2022 |

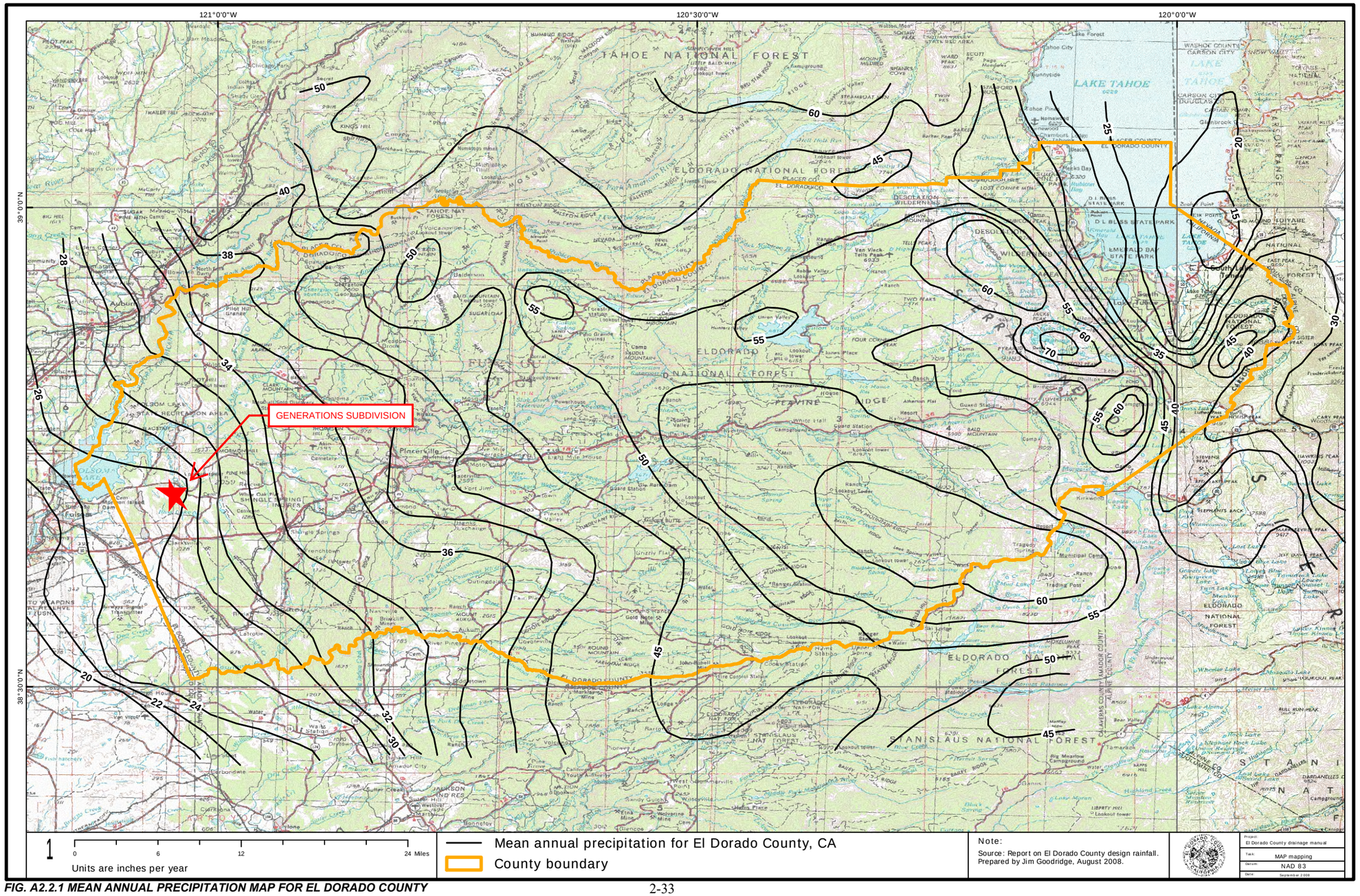
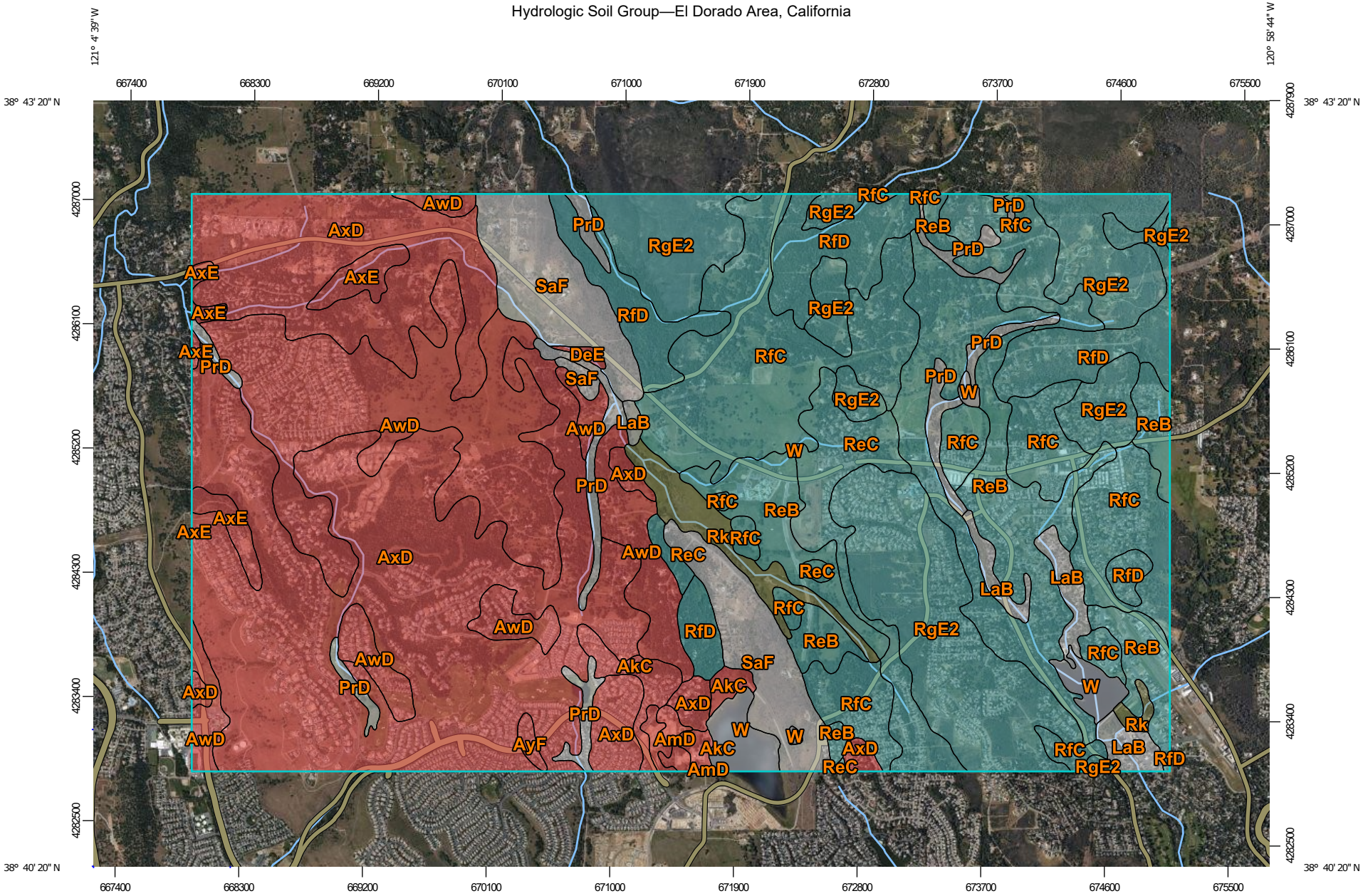



*FIG. A2.2.1 MEAN ANNUAL PRECIPITATION MAP FOR EL DORADO COUNTY*


121° 4' 39" W
120° 58' 44" W
38° 43' 20" N
38° 40' 20" N
667400
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AyF
Map Scale: 1:39,100 if printed on A landscape (11" x 8.5") sheet.
N
Meters
0 500 1000 2000 3000
Feet
0 1500 3000 6000 9000
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

## MAP LEGEND

**Area of Interest (AOI)**

Area of Interest (AOI)

**Soils**

**Soil Rating Polygons**

A

A/D

B

B/D

C

C/D

D

Not rated or not available

**Soil Rating Lines**

A

A/D

B

B/D

C

C/D

D

Not rated or not available

**Soil Rating Points**

A

A/D

B

B/D

C

C/D

D

Not rated or not available

**Water Features**

Streams and Canals

**Transportation**

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

**Background**

Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: El Dorado Area, California
Survey Area Data: Version 13, Sep 3, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 3, 2019—Oct 29, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

**Coastal Base Flood Elevations** shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study Report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction, and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures in this jurisdiction.

The **projection** used in the preparation of this map was California State Plane, Zone II. The **horizontal datum** was NAD83, GRS80 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the **same vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey, SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit their website at http://www.ngs.noaa.gov/.

**Base map** information shown on this FIRM was derived from multiple sources. This information was compiled from the U.S. Geological Survey, 1989 and 1993, El Dorado County Surveyor Office, 2005, National Geodetic Survey, 2005, California Department of Forestry, 2004, and U.S. Bureau of Reclamation, 2003. Additional information was photogrammetrically compiled at a scale of 1:12,000 from U.S. Geological Survey aerial photography dated 1997 to 2001.

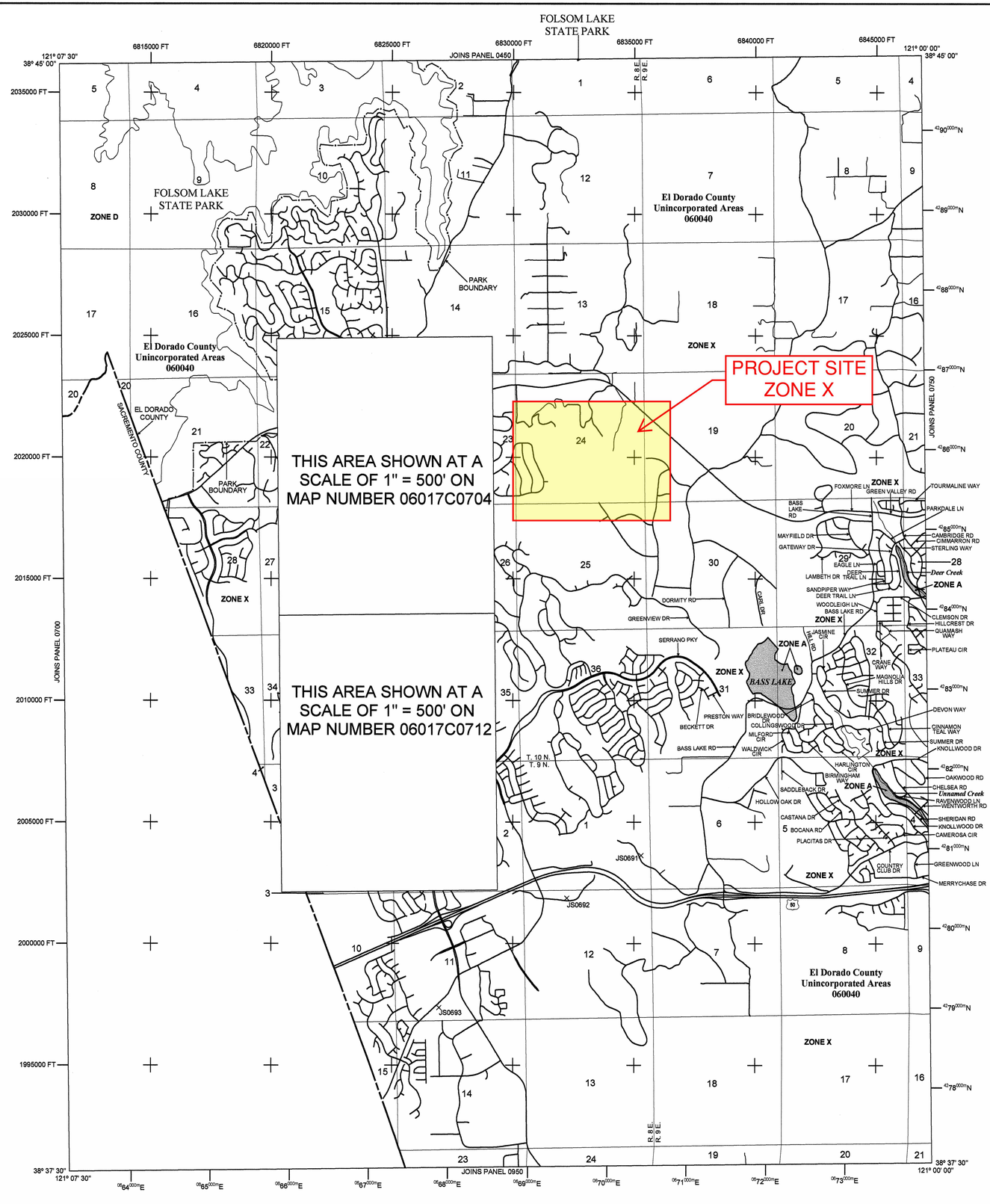
This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

**Corporate limits** shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and their website at http://www.msc.fema.gov/.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1- 877- FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/.




## LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- **ZONE A** — No Base Flood Elevations determined.
- **ZONE AE** — Base Flood Elevations determined.
- **ZONE AH** — Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- **ZONE AO** — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- **ZONE AR** — Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- **ZONE A99** — Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- **ZONE V** — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- **ZONE VE** — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- **ZONE X** — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- **ZONE X** — Areas determined to be outside the 0.2% annual chance floodplain.
- **ZONE D** — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D Boundary
- CBRS and OPA Boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- A — A — Cross section line
- 23 — 23 — Transect line
- 97° 07' 30", 32° 22' 30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 4276000mE — 1000-meter Universal Transverse Mercator grid values, zone 10
- 600000 FT — 5000-foot grid ticks: California State Plane coordinate system, zone II (FIPSZONE 0402), Lambert Conformal Conic Projection
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index.

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP PANEL

SEPTEMBER 26, 2008

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 2000'

1000 0 2000 4000 FEET
600 0 600 1200 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

**PANEL 0725E**

# FIRM

**FLOOD INSURANCE RATE MAP**

**EL DORADO COUNTY, CALIFORNIA AND INCORPORATED AREAS**

**PANEL 725 OF 1125**

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

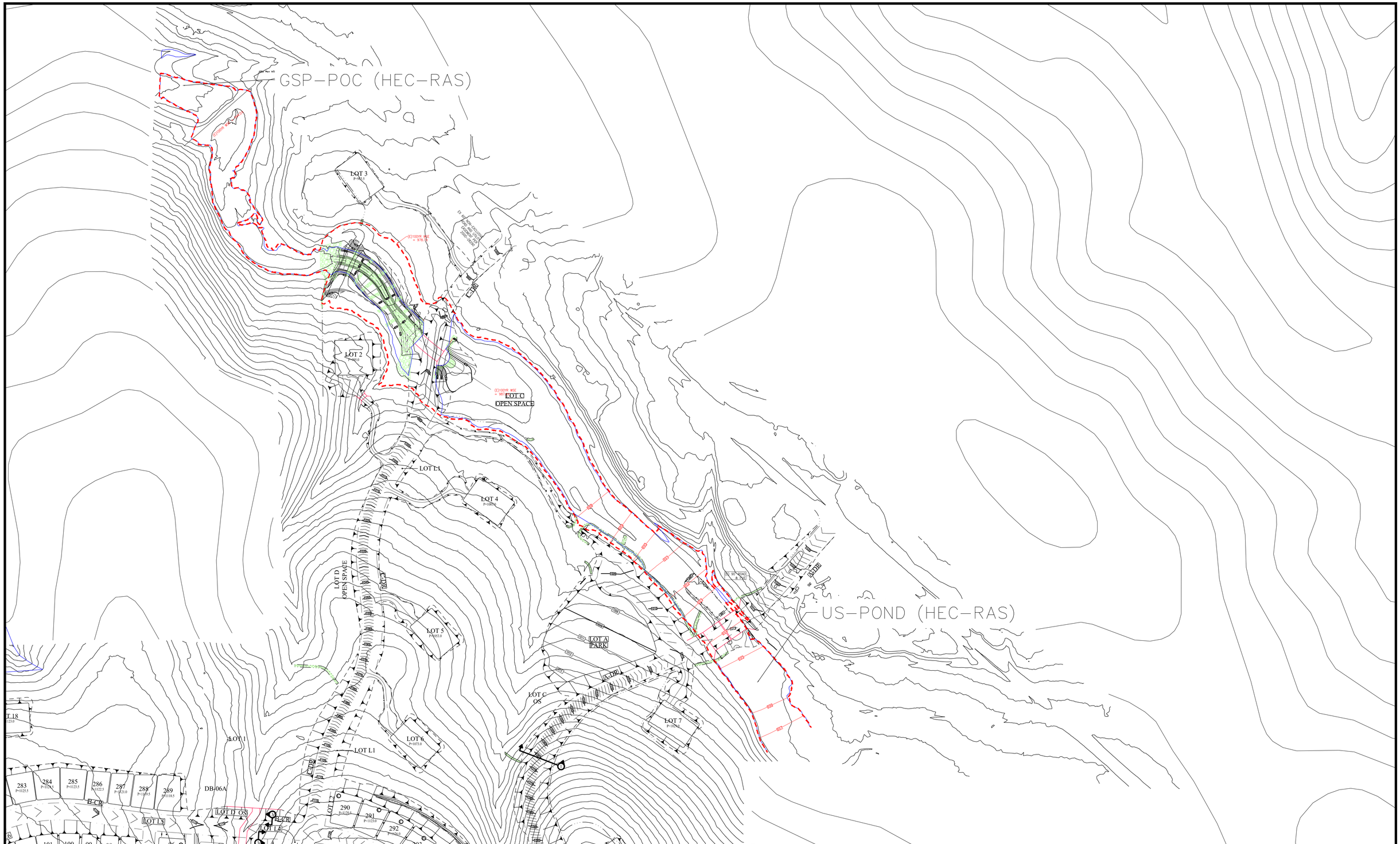
| COMMUNITY | NUMBER | PANEL | SUFFIX |
|---|---|---|---|
| EL DORADO COUNTY | 060040 | 0725 | E |

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

**MAP NUMBER 06017C0725E**

**EFFECTIVE DATE SEPTEMBER 26, 2008**

**Federal Emergency Management Agency**




| | | | | | |
|---|---|---|---|---|---|
| | SCALE: 1:150 | WARNING 0 1/2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE. | **DOMENICHELLI & ASSOCIATES** 5180 Golden Foothill Prkwy, Suite 220 El Dorado Hills, CA 95762 Ph: (916) 933-1997 Fax: (916) 933-4778 | EXHIBIT 6 - 100-Year Floodplain Map | GENERATIONS November 2022 |

# Appendix B: Hydrology Data and Results

*Table A2.2.1 Rainfall Depth Table with Return Period of 2 Years*

## El Dorado County Design Rainfall
## Precipitation Depth Duration Frequency
## Return Period 2 Years

| Mean Annual Precipitation | 5 Min | 10 Min | 15 Min | 30 Min | 1 Hour | 2 Hour | 3 Hour | 6 Hour | 12 Hour | 1 Day | 2 Day | 3 Day | 4 Day | 5 Day | 6 Day | 8 Day | 10 Day | 15 Day | 20 Day | 30 Day | 60 Day | 365 Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 0.04 | 0.06 | 0.07 | 0.10 | 0.14 | 0.19 | 0.23 | 0.33 | 0.46 | 0.65 | 0.87 | 1.01 | 1.11 | 1.20 | 1.27 | 1.44 | 1.60 | 1.93 | 2.18 | 2.69 | 3.91 | 7.81 |
| 10 | 0.05 | 0.07 | 0.09 | 0.12 | 0.17 | 0.24 | 0.29 | 0.41 | 0.58 | 0.81 | 1.09 | 1.26 | 1.39 | 1.50 | 1.59 | 1.80 | 2.00 | 2.41 | 2.72 | 3.36 | 4.89 | 9.76 |
| 12 | 0.06 | 0.08 | 0.10 | 0.14 | 0.20 | 0.29 | 0.35 | 0.49 | 0.69 | 0.98 | 1.31 | 1.51 | 1.67 | 1.81 | 1.91 | 2.16 | 2.40 | 2.89 | 3.26 | 4.03 | 5.87 | 11.71 |
| 14 | 0.07 | 0.10 | 0.12 | 0.17 | 0.24 | 0.33 | 0.41 | 0.57 | 0.81 | 1.14 | 1.53 | 1.77 | 1.94 | 2.11 | 2.23 | 2.52 | 2.80 | 3.38 | 3.81 | 4.70 | 6.85 | 13.66 |
| 16 | 0.08 | 0.11 | 0.14 | 0.19 | 0.27 | 0.38 | 0.47 | 0.66 | 0.93 | 1.30 | 1.75 | 2.02 | 2.22 | 2.41 | 2.55 | 2.88 | 3.21 | 3.86 | 4.35 | 5.38 | 7.83 | 15.61 |
| 18 | 0.09 | 0.13 | 0.15 | 0.22 | 0.31 | 0.43 | 0.52 | 0.74 | 1.04 | 1.47 | 1.97 | 2.27 | 2.50 | 2.71 | 2.86 | 3.24 | 3.61 | 4.34 | 4.90 | 6.05 | 8.81 | 17.57 |
| 20 | 0.10 | 0.14 | 0.17 | 0.24 | 0.34 | 0.48 | 0.58 | 0.82 | 1.16 | 1.63 | 2.19 | 2.5 | 27=2.20 | 3.01 | 3.18 | 3.60 | 4.01 | 4.82 | 5.44 | 6.72 | 9.78 | 19.52 |
| 22 | 0.11 | 0.15 | 0.19 | 0.26 | 0.37 | 0.53 | 0.64 | 0.90 | 1.27 | 1.79 | 2.40 | 2.78 | 3.06 | 3.31 | 3.50 | 3.96 | 4.41 | 5.30 | 5.98 | 7.39 | 10.76 | 21.47 |
| 24 | 0.12 | 0.17 | 0.21 | 0.29 | 0.41 | 0.57 | 0.70 | 0.99 | 1.39 | 1.95 | 2.62 | 3.03 | 3.33 | 3.61 | 3.82 | 4.32 | 4.81 | 5.79 | 6.53 | 8.06 | 11.74 | 23.42 |
| 26 | 0.13 | 0.18 | 0.22 | 0.31 | 0.44 | 0.62 | 0.76 | 1.07 | 1.50 | 2.12 | 2.84 | 3.28 | 3.61 | 3.91 | 4.14 | 4.68 | 5.21 | 6.27 | 7.07 | 8.73 | 12.72 | 25.37 |
| 28 | 0.14 | 0.20 | 0.24 | 0.34 | 0.47 | 0.67 | 0.82 | 1.15 | 1.62 | 2.28 | 3.06 | 3.53 | 3.89 | 4.21 | 4.45 | 5.04 | 5.61 | 6.75 | 7.62 | 9.41 | 13.70 | 27.33 |
| 30 | 0.15 | 0.21 | 0.26 | 0.36 | 0.51 | 0.72 | 0.87 | 1.23 | 1.74 | 2.44 | 3.28 | 3.78 | 4.17 | 4.51 | 4.77 | 5.40 | 6.01 | 7.23 | 8.16 | 10.08 | 14.68 | 29.28 |
| 35 | 0.17 | 0.24 | 0.30 | 0.42 | 0.59 | 0.84 | 1.02 | 1.44 | 2.02 | 2.85 | 3.83 | 4.42 | 4.86 | 5.26 | 5.57 | 6.30 | 7.01 | 8.44 | 9.52 | 11.76 | 17.12 | 34.16 |
| 40 | 0.20 | 0.28 | 0.34 | 0.48 | 0.68 | 0.95 | 1.17 | 1.64 | 2.31 | 3.26 | 4.37 | 5.05 | 5.56 | 6.02 | 6.36 | 7.20 | 8.01 | 9.64 | 10.88 | 13.44 | 19.57 | 39.04 |
| 45 | 0.22 | 0.31 | 0.38 | 0.54 | 0.76 | 1.07 | 1.31 | 1.85 | 2.60 | 3.67 | 4.92 | 5.68 | 6.25 | 6.77 | 7.16 | 8.10 | 9.02 | 10.85 | 12.24 | 15.12 | 22.02 | 43.92 |
| 50 | 0.25 | 0.35 | 0.43 | 0.60 | 0.85 | 1.19 | 1.46 | 2.05 | 2.89 | 4.07 | 5.47 | 6.31 | 6.94 | 7.52 | 7.95 | 9.00 | 10.02 | 12.06 | 13.60 | 16.80 | 24.46 | 48.80 |
| 55 | 0.27 | 0.38 | 0.47 | 0.66 | 0.93 | 1.31 | 1.60 | 2.26 | 3.18 | 4.48 | 6.01 | 6.94 | 7.64 | 8.27 | 8.75 | 9.91 | 11.02 | 13.26 | 14.96 | 18.48 | 26.91 | 53.68 |
| 60 | 0.30 | 0.42 | 0.51 | 0.72 | 1.02 | 1.43 | 1.75 | 2.46 | 3.47 | 4.89 | 6.56 | 7.57 | 8.33 | 9.03 | 9.54 | 10.81 | 12.02 | 14.47 | 16.32 | 20.16 | 29.35 | 58.55 |
| 65 | 0.32 | 0.45 | 0.56 | 0.78 | 1.10 | 1.55 | 1.90 | 2.67 | 3.76 | 5.29 | 7.10 | 8.20 | 9.03 | 9.78 | 10.34 | 11.71 | 13.02 | 15.67 | 17.68 | 21.84 | 31.80 | 63.43 |
| 70 | 0.35 | 0.49 | 0.60 | 0.84 | 1.19 | 1.67 | 2.04 | 2.87 | 4.05 | 5.70 | 7.65 | 8.83 | 9.72 | 10.53 | 11.13 | 12.61 | 14.02 | 16.88 | 19.04 | 23.52 | 34.25 | 68.31 |

**Source: Design Rainfall Tables for El Dorado County prepared by Jim Goodridge, August 30, 2008**

*Table A2.2.3 Rainfall Depth Table with Return Period of 10 Years*

## El Dorado County Design Rainfall
## Precipitation Depth Duration Frequency
## Return Period 10 Years

| Mean Annual Precipitation | 5 Min | 10 Min | 15 Min | 30 Min | 1 Hour | 2 Hour | 3 Hour | 6 Hour | 12 Hour | 1 Day | 2 Day | 3 Day | 4 Day | 5 Day | 6 Day | 8 Day | 10 Day | 15 Day | 20 Day | 30 Day | 60 Day | 365 Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 0.06 | 0.09 | 0.11 | 0.15 | 0.22 | 0.30 | 0.37 | 0.52 | 0.73 | 1.03 | 1.42 | 1.68 | 1.87 | 2.04 | 2.16 | 2.44 | 2.67 | 3.13 | 3.53 | 4.32 | 6.22 | 11.79 |
| 10 | 0.08 | 0.11 | 0.14 | 0.19 | 0.27 | 0.38 | 0.46 | 0.65 | 0.92 | 1.29 | 1.78 | 2.10 | 2.34 | 2.54 | 2.70 | 3.05 | 3.34 | 3.92 | 4.42 | 5.40 | 7.77 | 14.74 |
| 12 | 0.09 | 0.13 | 0.16 | 0.23 | 0.32 | 0.45 | 0.56 | 0.78 | 1.10 | 1.55 | 2.13 | 2.52 | 2.81 | 3.05 | 3.24 | 3.66 | 4.01 | 4.70 | 5.30 | 6.48 | 9.32 | 17.68 |
| 14 | 0.11 | 0.16 | 0.19 | 0.27 | 0.38 | 0.53 | 0.65 | 0.91 | 1.28 | 1.81 | 2.49 | 2.94 | 3.27 | 3.56 | 3.78 | 4.28 | 4.68 | 5.48 | 6.18 | 7.56 | 10.88 | 20.63 |
| 16 | 0.13 | 0.18 | 0.22 | 0.31 | 0.43 | 0.61 | 0.74 | 1.04 | 1.47 | 2.07 | 2.84 | 3.36 | 3.74 | 4.07 | 4.32 | 4.89 | 5.34 | 6.27 | 7.07 | 8.64 | 12.43 | 23.58 |
| 18 | 0.14 | 0.20 | 0.24 | 0.34 | 0.48 | 0.68 | 0.83 | 1.17 | 1.65 | 2.33 | 3.20 | 3.78 | 4.21 | 4.58 | 4.86 | 5.50 | 6.01 | 7.05 | 7.95 | 9.72 | 13.98 | 26.52 |
| 20 | 0.16 | 0.22 | 0.27 | 0.38 | 0.54 | 0.76 | 0.93 | 1.30 | 1.83 | 2.58 | 3.55 | 4.2 | 27=3.49 | 5.09 | 5.40 | 6.11 | 6.68 | 7.83 | 8.83 | 10.79 | 15.54 | 29.47 |
| 22 | 0.17 | 0.24 | 0.30 | 0.42 | 0.59 | 0.83 | 1.02 | 1.43 | 2.02 | 2.84 | 3.91 | 4.62 | 5.15 | 5.60 | 5.94 | 6.72 | 7.35 | 8.62 | 9.72 | 11.87 | 17.09 | 32.42 |
| 24 | 0.19 | 0.27 | 0.33 | 0.46 | 0.65 | 0.91 | 1.11 | 1.56 | 2.20 | 3.10 | 4.26 | 5.04 | 5.61 | 6.11 | 6.48 | 7.33 | 8.01 | 9.40 | 10.60 | 12.95 | 18.65 | 35.36 |
| 26 | 0.20 | 0.29 | 0.35 | 0.50 | 0.70 | 0.98 | 1.20 | 1.69 | 2.39 | 3.36 | 4.62 | 5.46 | 6.08 | 6.62 | 7.02 | 7.94 | 8.68 | 10.18 | 11.48 | 14.03 | 20.20 | 38.31 |
| 28 | 0.22 | 0.31 | 0.38 | 0.53 | 0.75 | 1.06 | 1.30 | 1.82 | 2.57 | 3.62 | 4.97 | 5.88 | 6.55 | 7.13 | 7.55 | 8.55 | 9.35 | 10.97 | 12.37 | 15.11 | 21.75 | 41.26 |
| 30 | 0.24 | 0.33 | 0.41 | 0.57 | 0.81 | 1.14 | 1.39 | 1.95 | 2.75 | 3.88 | 5.33 | 6.30 | 7.02 | 7.63 | 8.09 | 9.16 | 10.02 | 11.75 | 13.25 | 16.19 | 23.31 | 44.21 |
| 35 | 0.28 | 0.39 | 0.47 | 0.67 | 0.94 | 1.33 | 1.62 | 2.28 | 3.21 | 4.52 | 6.21 | 7.35 | 8.19 | 8.91 | 9.44 | 10.69 | 11.69 | 13.71 | 15.46 | 18.89 | 27.19 | 51.57 |
| 40 | 0.32 | 0.44 | 0.54 | 0.76 | 1.08 | 1.51 | 1.85 | 2.61 | 3.67 | 5.17 | 7.10 | 8.40 | 9.36 | 10.18 | 10.79 | 12.21 | 13.36 | 15.67 | 17.67 | 21.59 | 31.08 | 58.94 |
| 45 | 0.35 | 0.50 | 0.61 | 0.86 | 1.21 | 1.70 | 2.08 | 2.93 | 4.13 | 5.81 | 7.99 | 9.46 | 10.53 | 11.45 | 12.14 | 13.74 | 15.03 | 17.62 | 19.88 | 24.29 | 34.96 | 66.31 |
| 50 | 0.39 | 0.55 | 0.68 | 0.95 | 1.34 | 1.89 | 2.31 | 3.26 | 4.59 | 6.46 | 8.88 | 10.51 | 11.69 | 12.72 | 13.49 | 15.27 | 16.70 | 19.58 | 22.08 | 26.99 | 38.84 | 73.68 |
| 55 | 0.43 | 0.61 | 0.75 | 1.05 | 1.48 | 2.08 | 2.54 | 3.58 | 5.05 | 7.11 | 9.76 | 11.56 | 12.86 | 14.00 | 14.84 | 16.79 | 18.37 | 21.54 | 24.29 | 29.69 | 42.73 | 81.04 |
| 60 | 0.47 | 0.67 | 0.81 | 1.15 | 1.61 | 2.27 | 2.78 | 3.91 | 5.50 | 7.75 | 10.65 | 12.61 | 14.03 | 15.27 | 16.19 | 18.32 | 20.04 | 23.50 | 26.50 | 32.38 | 46.61 | 88.41 |
| 65 | 0.51 | 0.72 | 0.88 | 1.24 | 1.75 | 2.46 | 3.01 | 4.23 | 5.96 | 8.40 | 11.54 | 13.66 | 15.20 | 16.54 | 17.54 | 19.85 | 21.71 | 25.46 | 28.71 | 35.08 | 50.50 | 95.78 |
| 70 | 0.55 | 0.78 | 0.95 | 1.34 | 1.88 | 2.65 | 3.24 | 4.56 | 6.42 | 9.04 | 12.43 | 14.71 | 16.37 | 17.81 | 18.89 | 21.38 | 23.38 | 27.42 | 30.92 | 37.78 | 54.38 | ##### |

**Source: Design Rainfall Tables for El Dorado County prepared by Jim Goodridge, August 30, 2008**

*Table A2.2.6 Rainfall Depth Table with Return Period of 100 Years*

## El Dorado County Design Rainfall
## Precipitation Depth Duration Frequency
## Return Period 100 Years

| Mean Annual Precipitation | 5 Min | 10 Min | 15 Min | 30 Min | 1 Hour | 2 Hour | 3 Hour | 6 Hour | 12 Hour | 1 Day | 2 Day | 3 Day | 4 Day | 5 Day | 6 Day | 8 Day | 10 Day | 15 Day | 20 Day | 30 Day | 60 Day | 365 Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 0.09 | 0.13 | 0.15 | 0.22 | 0.30 | 0.43 | 0.52 | 0.74 | 1.04 | 1.46 | 2.03 | 2.43 | 2.72 | 2.97 | 3.15 | 3.53 | 3.80 | 4.34 | 4.93 | 5.95 | 8.45 | 15.52 |
| 10 | 0.11 | 0.16 | 0.19 | 0.27 | 0.38 | 0.54 | 0.65 | 0.92 | 1.30 | 1.83 | 2.54 | 3.04 | 3.40 | 3.71 | 3.94 | 4.42 | 4.75 | 5.42 | 6.16 | 7.43 | 10.56 | 19.40 |
| 12 | 0.13 | 0.19 | 0.23 | 0.32 | 0.46 | 0.64 | 0.78 | 1.11 | 1.56 | 2.19 | 3.05 | 3.65 | 4.08 | 4.45 | 4.73 | 5.30 | 5.71 | 6.50 | 7.40 | 8.92 | 12.67 | 23.28 |
| 14 | 0.16 | 0.22 | 0.27 | 0.38 | 0.53 | 0.75 | 0.92 | 1.29 | 1.82 | 2.56 | 3.55 | 4.26 | 4.76 | 5.19 | 5.51 | 6.18 | 6.66 | 7.59 | 8.63 | 10.41 | 14.78 | 27.16 |
| 16 | 0.18 | 0.25 | 0.31 | 0.43 | 0.61 | 0.86 | 1.05 | 1.47 | 2.08 | 2.92 | 4.06 | 4.87 | 5.44 | 5.94 | 6.30 | 7.07 | 7.61 | 8.67 | 9.86 | 11.89 | 16.89 | 31.04 |
| 18 | 0.20 | 0.28 | 0.34 | 0.49 | 0.68 | 0.96 | 1.18 | 1.66 | 2.33 | 3.29 | 4.57 | 5.47 | 6.12 | 6.68 | 7.09 | 7.95 | 8.56 | 9.76 | 11.09 | 13.38 | 19.00 | 34.92 |
| 20 | 0.22 | 0.31 | 0.38 | 0.54 | 0.76 | 1.07 | 1.31 | 1.84 | 2.59 | 3.65 | 5.08 | 6.0 | 27=4.93 | 7.42 | 7.88 | 8.83 | 9.51 | 10.84 | 12.33 | 14.86 | 21.12 | 38.80 |
| 22 | 2.24 | 0.34 | 0.42 | 0.59 | 0.84 | 1.18 | 1.44 | 2.03 | 2.85 | 4.02 | 5.59 | 6.69 | 7.48 | 8.16 | 8.66 | 9.72 | 10.46 | 11.92 | 13.56 | 16.35 | 23.23 | 42.69 |
| 24 | 0.27 | 0.38 | 0.46 | 0.65 | 0.91 | 1.28 | 1.57 | 2.21 | 3.11 | 4.38 | 6.09 | 7.30 | 8.17 | 8.90 | 9.45 | 10.60 | 11.41 | 13.01 | 14.79 | 17.84 | 25.34 | 46.57 |
| 26 | 0.29 | 0.41 | 0.50 | 0.70 | 0.99 | 1.39 | 1.70 | 2.39 | 3.37 | 4.75 | 6.60 | 7.91 | 8.85 | 9.64 | 10.24 | 11.48 | 12.36 | 14.09 | 16.02 | 19.32 | 27.45 | 50.45 |
| 28 | 0.31 | 0.44 | 0.54 | 0.76 | 1.06 | 1.50 | 1.83 | 2.58 | 3.63 | 5.11 | 7.11 | 8.51 | 9.53 | 10.39 | 11.03 | 12.37 | 13.31 | 15.18 | 17.26 | 20.81 | 29.56 | 54.33 |
| 30 | 0.33 | 0.47 | 0.57 | 0.81 | 1.14 | 1.61 | 1.96 | 2.76 | 3.89 | 5.48 | 7.62 | 9.12 | 10.21 | 11.13 | 11.81 | 13.25 | 14.26 | 16.26 | 18.49 | 22.30 | 31.67 | 58.21 |
| 35 | 0.39 | 0.55 | 0.67 | 0.94 | 1.33 | 1.87 | 2.29 | 3.22 | 4.54 | 6.39 | 8.89 | 10.64 | 11.91 | 12.98 | 13.78 | 15.46 | 16.64 | 18.97 | 21.57 | 26.01 | 36.95 | 67.91 |
| 40 | 0.45 | 0.63 | 0.77 | 1.08 | 1.52 | 2.14 | 2.62 | 3.68 | 5.19 | 7.31 | 10.15 | 12.16 | 13.61 | 14.84 | 15.75 | 17.67 | 19.02 | 21.68 | 24.65 | 29.73 | 42.23 | 77.61 |
| 45 | 0.50 | 0.71 | 0.86 | 1.21 | 1.71 | 2.41 | 2.94 | 4.14 | 5.84 | 8.22 | 11.42 | 13.68 | 15.31 | 16.69 | 17.72 | 19.87 | 21.40 | 24.39 | 27.73 | 33.45 | 47.51 | 87.31 |
| 50 | 0.56 | 0.78 | 0.96 | 1.35 | 1.90 | 2.68 | 3.27 | 4.60 | 6.48 | 9.13 | 12.69 | 15.20 | 17.01 | 18.55 | 19.69 | 22.08 | 23.77 | 27.10 | 30.81 | 37.16 | 52.79 | 97.01 |
| 55 | 0.61 | 0.86 | 1.05 | 1.48 | 2.09 | 2.94 | 3.60 | 5.06 | 7.13 | 10.05 | 13.96 | 16.72 | 18.71 | 20.40 | 21.66 | 24.29 | 26.15 | 29.81 | 33.89 | 40.88 | 58.07 | 106.71 |
| 60 | 0.67 | 0.94 | 1.15 | 1.62 | 2.28 | 3.21 | 3.92 | 5.53 | 7.78 | 10.96 | 15.23 | 18.24 | 20.41 | 22.26 | 23.63 | 26.50 | 28.53 | 32.52 | 36.98 | 44.59 | 63.35 | 116.41 |
| 65 | 0.72 | 1.02 | 1.25 | 1.75 | 2.47 | 3.48 | 4.25 | 5.99 | 8.43 | 11.87 | 16.50 | 19.76 | 22.11 | 24.11 | 25.59 | 28.71 | 30.90 | 35.23 | 40.06 | 48.31 | 68.62 | 126.12 |
| 70 | 0.78 | 1.10 | 1.34 | 1.89 | 2.66 | 3.75 | 4.58 | 6.45 | 9.08 | 12.79 | 17.77 | 21.28 | 23.82 | 25.97 | 27.56 | 30.92 | 33.28 | 37.94 | 43.14 | 52.03 | 73.90 | 135.82 |

**Source: Design Rainfall Tables for El Dorado County prepared by Jim Goodridge, August 30, 2008**

**Table 2-2c** Runoff curve numbers for other agricultural lands [1/]

| Cover description | | Curve numbers for hydrologic soil group | | | |
|---|---|---|---|---|---|
| Cover type | Hydrologic condition | A | B | C | D |
| Pasture, grassland, or range—continuous forage for grazing. [2/] | Poor | 68 | 79 | 86 | 89 |
| | Fair | 49 | 69 | 79 | 84 |
| | Good | 39 | 61 | 74 | 80 |
| Meadow—continuous grass, protected from grazing and generally mowed for hay. | — | 30 | 58 | 71 | 78 |
| Brush—brush-weed-grass mixture with brush the major element. [3/] | Poor | 48 | 67 | 77 | 83 |
| | Fair | 35 | 56 | 70 | 77 |
| | Good | 30 [4/] | 48 | 65 | 73 |
| Woods—grass combination (orchard or tree farm). [5/] | Poor | 57 | 73 | 82 | 86 |
| | Fair | 43 | 65 | 76 | 82 |
| | Good | 32 | 58 | 72 | 79 |
| Woods. [6/] | Poor | 45 | 66 | 77 | 83 |
| | Fair | 36 | 60 | 73 | 79 |
| | Good | 30 [4/] | 55 | 70 | 77 |
| Farmsteads—buildings, lanes, driveways, and surrounding lots. | — | 59 | 74 | 82 | 86 |

1 Average runoff condition, and $I_a = 0.2S$.

2 *Poor:* <50%) ground cover or heavily grazed with no mulch.
*Fair:* 50 to 75% ground cover and not heavily grazed.
*Good:* > 75% ground cover and lightly or only occasionally grazed.

3 *Poor:* <50% ground cover.
*Fair:* 50 to 75% ground cover.
*Good:* >75% ground cover.

4 Actual curve number is less than 30; use CN = 30 for runoff computations.

5 CN's shown were computed for areas with 50% woods and 50% grass (pasture) cover. Other combinations of conditions may be computed from the CN's for woods and pasture.

6 *Poor:* Forest litter, small trees, and brush are destroyed by heavy grazing or regular burning.
*Fair:* Woods are grazed but not burned, and some forest litter covers the soil.
*Good:* Woods are protected from grazing, and litter and brush adequately cover the soil.

**Table 2-2a** Runoff curve numbers for urban areas [1/]

| Cover description: Cover type and hydrologic condition | Average percent impervious area [2/] | Curve numbers for hydrologic soil group: A | B | C | D |
|---|---|---|---|---|---|
| *Fully developed urban areas (vegetation established)* | | | | | |
| Open space (lawns, parks, golf courses, cemeteries, etc.) [3/]: | | | | | |
| Poor condition (grass cover < 50%) | | 68 | 79 | 86 | 89 |
| Fair condition (grass cover 50% to 75%) | | 49 | 69 | 79 | 84 |
| Good condition (grass cover > 75%) | | 39 | 61 | 74 | 80 |
| Impervious areas: | | | | | |
| Paved parking lots, roofs, driveways, etc. (excluding right-of-way) | | 98 | 98 | 98 | 98 |
| Streets and roads: | | | | | |
| Paved; curbs and storm sewers (excluding right-of-way) | | 98 | 98 | 98 | 98 |
| Paved; open ditches (including right-of-way) | | 83 | 89 | 92 | 93 |
| Gravel (including right-of-way) | | 76 | 85 | 89 | 91 |
| Dirt (including right-of-way) | | 72 | 82 | 87 | 89 |
| Western desert urban areas: | | | | | |
| Natural desert landscaping (pervious areas only) [4/] | | 63 | 77 | 85 | 88 |
| Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders) | | 96 | 96 | 96 | 96 |
| Urban districts: | | | | | |
| Commercial and business | 85 | 89 | 92 | 94 | 95 |
| Industrial | 72 | 81 | 88 | 91 | 93 |
| Residential districts by average lot size: | | | | | |
| 1/8 acre or less (town houses) | 65 | 77 | 85 | 90 | 92 |
| 1/4 acre | 38 | 61 | 75 | 83 | 87 |
| 1/3 acre | 30 | 57 | 72 | 81 | 86 |
| 1/2 acre | 25 | 54 | 70 | 80 | 85 |
| 1 acre | 20 | 51 | 68 | 79 | 84 |
| 2 acres | 12 | 46 | 65 | 77 | 82 |
| *Developing urban areas* | | | | | |
| Newly graded areas (pervious areas only, no vegetation) [5/] | | 77 | 86 | 91 | 94 |
| Idle lands (CN's are determined using cover types similar to those in table 2-2c). | | | | | |

[1] Average runoff condition, and $I_a = 0.2S$.

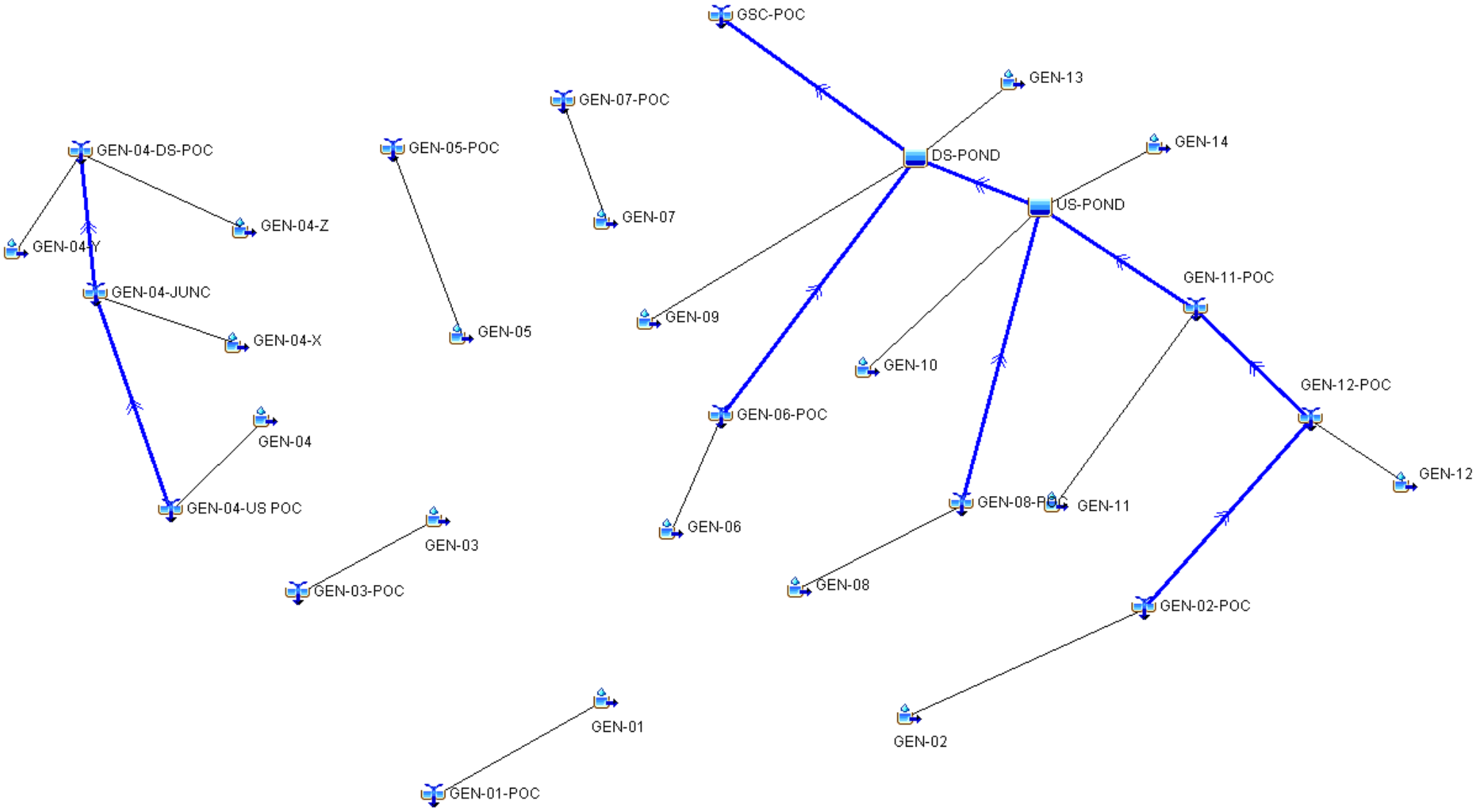
[2] The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.

[3] CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

[4] Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

[5] Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4 based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

# HEC-HMS - EXISTING CONDITIONS



**1) Shed Area Description**

| SUB BASIN | Percent woods | Area Woods ($ft^2$) | Area Pasture ($ft^2$) | Area 1/4 AC lot ($ft^2$) | CN | Total Area ($FT^2$) | Total Area (AC) | Total Area (SqM) | Imp. Area (FT2) | Percent Imperv (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| GEN-01 | 20% | 302603 | 1210411 | 0 | 83.6 | 1592646 | 36.6 | 0.0571 | 79632 | 5% |
| GEN-02 | 30% | 318488 | 743140 | 0 | 83.4 | 1117503 | 25.7 | 0.0401 | 55875 | 5% |
| GEN-03 | 5% | 58443 | 1110422 | 0 | 83.9 | 1168865 | 26.8 | 0.0419 | 0 | 0% |
| GEN-04 | 10% | 48185 | 433667 | 0 | 83.8 | 481852 | 11.1 | 0.0173 | 0 | 0% |
| GEN-04-X | 85% | 907310 | 160114 | 0 | 82.3 | 1067424 | 24.5 | 0.0383 | 0 | 0% |
| GEN-04-Y | 50% | 228271 | 0 | 228271 | 84.5 | 456543 | 10.5 | 0.0164 | 74194 | 16% |
| GEN-04-Z | 85% | 431497 | 76147 | 0 | 82.3 | 534362 | 12.3 | 0.0192 | 26718 | 5% |
| GEN-05 | 30% | 442999 | 1033663 | 0 | 83.4 | 1506798 | 34.6 | 0.0540 | 30136 | 2% |
| GEN-06 | 20% | 506583 | 2026333 | 0 | 83.6 | 2532916 | 58.1 | 0.0909 | 0 | 0% |
| GEN-07 | 30% | 155508 | 362853 | 0 | 83.4 | 545643 | 12.5 | 0.0196 | 27282 | 5% |
| GEN-08 | 10% | 125351 | 1128156 | 0 | 83.8 | 1253507 | 28.8 | 0.0450 | 0 | 0% |
| GEN-09 | 50% | 654476 | 654475 | 0 | 83.0 | 1377843 | 31.6 | 0.0494 | 68892 | 5% |
| GEN-10 | 10% | 143909 | 1295178 | 0 | 83.8 | 1439087 | 33.0 | 0.0516 | 0 | 0% |
| GEN-11 | 60% | 507454 | 338302 | 0 | 82.8 | 909415 | 20.9 | 0.0326 | 63659 | 7% |
| GEN-12 | 31% | 22731268 | 30339335 | 17256068 | 79.0 | 73326671 | 1683.3 | 2.6302 | 3000000 | 4% |
| GEN-13 | 5% | 9244 | 175638 | 15000 | 84.1 | 235155 | 5.4 | 0.0084 | 35273 | 15% |
| GEN-14 | 5% | 33134 | 629543 | 20000 | 84.0 | 718607 | 16.5 | 0.0258 | 35930 | 5% |

# EXISTING SHED LAG TIME CALCULATIONS

DOMENICHELLI AND ASSOCIATES, INC.
CIVIL ENGINEERING

**2) Lag Time**

| SUB BASIN | | Travel Time | | | | | | | | | | | | | | | | | | Lag time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Overland flow | | | | | Shallow Concentrated | | | | | | Channel flow | | | | | | total travel time | |
| | | Start Elev | End Elev | Length | Slope | time(min) | Start Elev | End Elev | Length | Slope | vel(fps) | time | Start Elev | End Elev | Length | slope | vel | time | (min) | (min) |
| GEN-01 | | 1262 | 1239 | 300 | 0.077 | 14 | 1239 | 1126 | 1840 | 0.061 | 4.1 | 7.5 | 1126 | | | - | - | - | 21 | **12.6** |
| GEN-02 | | 1262 | 1230 | 300 | 0.107 | 12 | 1230 | 1149 | 1356 | 0.060 | 4.0 | 5.6 | 1149 | | | - | - | - | 18 | **10.5** |
| GEN-03 | | 1192 | 1173 | 300 | 0.063 | 15 | 1173 | 1020 | 1397 | 0.110 | 5.3 | 4.4 | 1020 | | | - | - | - | 19 | **11.4** |
| GEN-04 | | 1190 | 1178 | 300 | 0.040 | 18 | 1178 | 1080 | 1231 | 0.080 | 4.6 | 4.4 | 1080 | | | - | - | - | 22 | **13.2** |
| GEN-04-X | | 1190 | 1178 | 300 | 0.040 | 18 | 1178 | 932 | 1200 | 0.205 | 7.4 | 2.7 | 932 | | | - | - | - | 20 | **12.2** |
| GEN-04-Y | | 1105 | 1090 | 170 | 0.088 | 8 | 1090 | 1050 | 386 | 0.104 | 5.2 | 1.2 | 1050 | 840 | 1630 | 0.1288 | 10.0 | 2.7 | 12 | **7.3** |
| GEN-04-Z | | 1190 | 1178 | 300 | 0.040 | 18 | 1178 | 840 | 972 | 0.348 | 9.4 | 1.7 | 840 | | | - | - | - | 19 | **11.6** |
| GEN-05 | | 1190 | 1186 | 300 | 0.020 | 23 | 1186 | 960 | 2054 | 0.110 | 5.3 | 6.4 | 960 | | | - | - | - | 30 | **17.8** |
| GEN-06 | | 1229 | 1221 | 300 | 0.027 | 21 | 1221 | 1072 | 2244 | 0.066 | 4.2 | 8.8 | 1072 | | | - | - | - | 30 | **17.7** |
| GEN-07 | | 1142 | 1133 | 300 | 0.030 | 14 | 1133 | 1040 | 875 | 0.106 | 5.3 | 2.8 | 1040 | | | - | - | - | 16 | **9.8** |
| GEN-08 | | 1242 | 1231 | 300 | 0.037 | 13 | 1231 | 1078 | 2047 | 0.075 | 4.5 | 7.6 | 1078 | | | - | - | - | 20 | **12.1** |
| GEN-09 | | 1159 | 1142 | 300 | 0.057 | 15 | 1142 | 975 | 2324 | 0.072 | 4.4 | 8.8 | 975 | 974 | 308 | 0.0032 | 2.4 | 2.2 | 26 | **15.8** |
| GEN-10 | | 1159 | 1123 | 300 | 0.120 | 11 | 1123 | 985 | 1529 | 0.090 | 4.9 | 5.2 | 985 | 980 | 799 | 0.0063 | 3.3 | 4.1 | 21 | **12.4** |
| GEN-11 | | 1166 | 1136 | 300 | 0.100 | 12 | 1136 | 992 | 906 | 0.159 | 6.4 | 2.4 | 992 | 991 | 295 | 0.0034 | 2.4 | 2.0 | 17 | **10.0** |
| GEN-12 | | 1445 | 1443 | 100 | 0.020 | 10 | 1443 | 1295 | 904 | 0.164 | 6.5 | 2.3 | 1295 | 1150 | 4750 | 0.0305 | 5.1 | 15.6 | 28 | - |
| | | | | | | | | | | | | | 1150 | 1020 | 6700 | 0.0194 | 6.8 | 16.5 | 44 | - |
| | | | | | | | | | | | | | 1020 | 990 | 3000 | 0.0100 | 4.9 | 10.3 | 54 | **32.6** |
| GEN-13 | | 1001 | 986 | 300 | 0.050 | 16 | 986 | 977 | 55 | 0.164 | 6.5 | 0.1 | 977 | 974 | 501 | 0.0060 | 3.2 | 2.6 | 19 | **11.3** |
| GEN-14 | | 1034 | 1028 | 245 | 0.024 | 18 | 1028 | 985 | 710 | 0.061 | 4.1 | 2.9 | 985 | 980 | 1016 | 0.0049 | 2.9 | 5.8 | 27 | **16.2** |

Overland time per equation 3-3 TR 55: n=0.24 or 0.15, p=7.0, Max L=300, Tt=( .007(nL)^.8)/((P)^.5 (s)^.4)

Shallow concentrated flow velocity based on Figure 3-1, TR-55: Length(ft) = 2000 max

Channel flow based on Manning's equation

Lag time = total travel time x 0.6

**3) Reaches**

| Reach | US ELV | DS ELV | LENGTH | SLOPE | N VALUE | xH:1v | BOTTOM WIDTH | CELERITY |
|---|---|---|---|---|---|---|---|---|
| GEN-04-X-REACH | 1070 | 932 | 836 | 0.165 | 0.06 | 3 | | 5 |
| GEN-04-Z-REACH | 932 | 840 | 937 | 0.098 | 0.06 | 3 | | 5 |
| GEN-09-REACH | 1073 | 974 | 2137 | 0.046 | 0.06 | 5 | | 5 |
| GEN-10-REACH | 1078 | 980 | 2216 | 0.044 | 0.06 | 3.5 | | 5 |
| GEN-11-REACH | 997 | 991 | 1004 | 0.006 | 0.06 | 15 | 15 | 5 |
| GEN-12-REACH | 1149 | 997 | 3988 | 0.038 | 0.06 | 10 | 15 | 5 |
| GEN-13-REACH | 980 | 974 | 546 | 0.011 | 0.06 | 6 | 15 | 5 |
| GEN-14-REACH | 991 | 980 | 1568 | 0.007 | 0.06 | 12 | 15 | 5 |

# HEC-HMS EXISTING CONDITIONS

## GLOBAL SUMMARY OF RESULTS

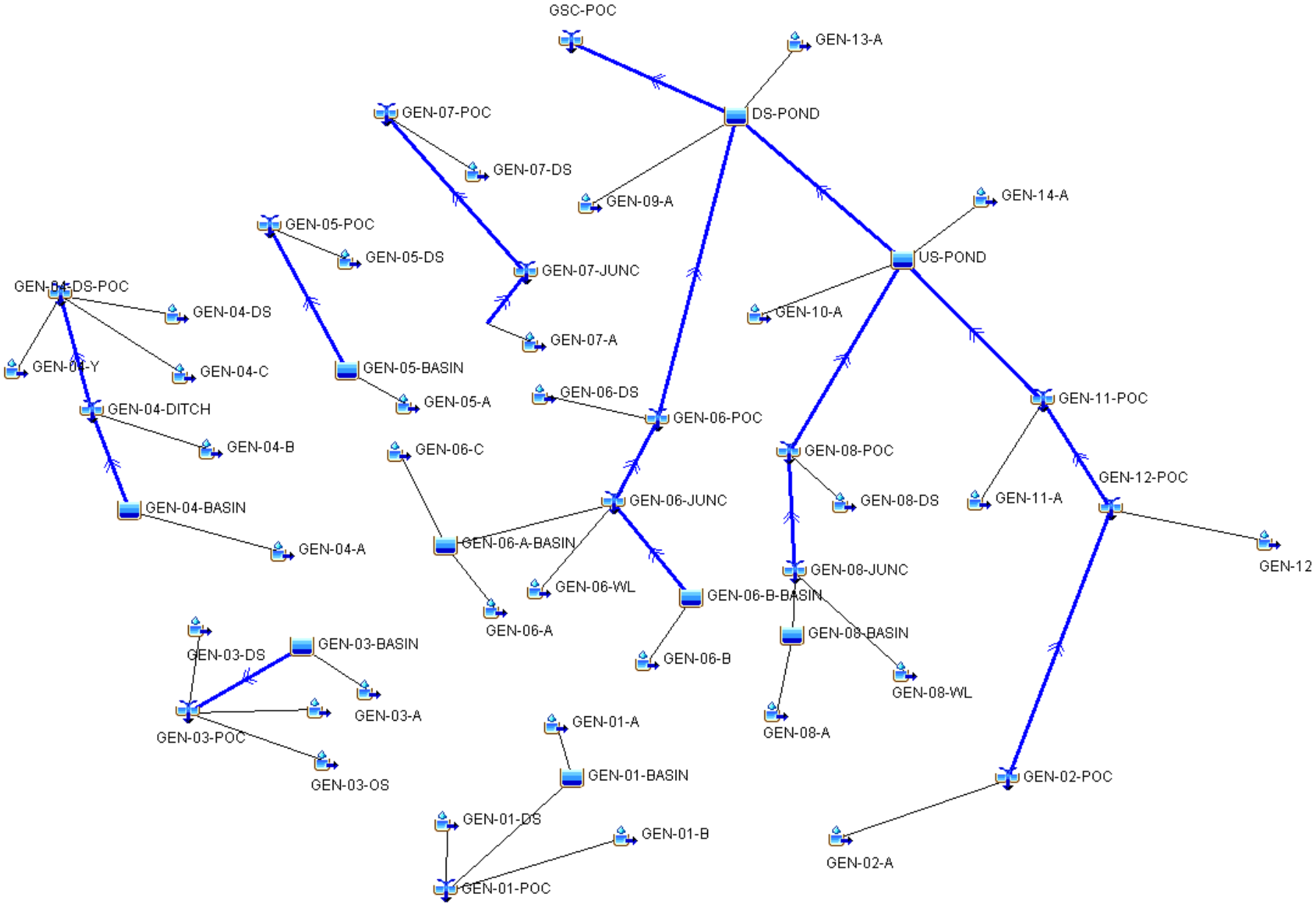
| EXISTING 2-YEAR RESULTS | | | | |
|---|---|---|---|---|
| Element | Drainage Area (SqMi) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| GEN-05 | 0.054 | 18.4 | Jan2013, 10: | 1.18 |
| GEN-04-X | 0.0383 | 9.9 | Jan2013, 10: | 0.8 |
| GEN-04 | 0.0173 | 6.8 | Jan2013, 10: | 1.17 |
| GEN-04-US POC | 0.0173 | 6.8 | Jan2013, 10: | 1.17 |
| GEN-04-X-REAC | 0.0173 | 6.8 | Jan2013, 10: | 1.17 |
| GEN-04-JUNC | 0.0556 | 16.5 | Jan2013, 10: | 0.91 |
| GEN-04-Z-REAC | 0.0556 | 16.5 | Jan2013, 10: | 0.91 |
| GEN-04-Z | 0.0192 | 5.6 | Jan2013, 10: | 0.87 |
| GEN-04-Y | 0.0164 | 7.6 | Jan2013, 10: | 1.12 |
| GEN-12 | 2.6302 | 555.6 | Jan2013, 10: | 1.04 |
| GEN-02 | 0.0401 | 17.9 | Jan2013, 10: | 1.21 |
| GEN-02-POC | 0.0401 | 17.9 | Jan2013, 10: | 1.21 |
| GEN-12-REACH | 0.0401 | 17.7 | Jan2013, 10: | 1.21 |
| GEN-12-POC | 2.6703 | 569.4 | Jan2013, 10: | 1.05 |
| GEN-11-REACH | 2.6703 | 567 | Jan2013, 10: | 1.05 |
| GEN-11 | 0.0326 | 14.9 | Jan2013, 10: | 1.21 |
| GEN-11-POC | 2.7029 | 570.9 | Jan2013, 10: | 1.05 |
| GEN-14-REACH | 2.7029 | 568.1 | Jan2013, 10: | 1.05 |
| GEN-08 | 0.045 | 18.5 | Jan2013, 10: | 1.17 |
| GEN-08-POC | 0.045 | 18.5 | Jan2013, 10: | 1.17 |
| GEN-10 | 0.0516 | 22.9 | Jan2013, 10: | 1.17 |
| GEN-10-REACH | 0.045 | 18.4 | Jan2013, 10: | 1.17 |
| GEN-14 | 0.0258 | 9.7 | Jan2013, 10: | 1.23 |
| US-POND | 2.8253 | 566.6 | Jan2013, 10: | 1.05 |
| GEN-13-REACH | 2.8253 | 566.1 | Jan2013, 10: | 1.05 |
| GEN-06 | 0.0909 | 30.8 | Jan2013, 10: | 1.16 |
| GEN-06-POC | 0.0909 | 30.8 | Jan2013, 10: | 1.16 |
| GEN-09-REACH | 0.0909 | 30.8 | Jan2013, 10: | 1.16 |
| GEN-09 | 0.0494 | 18.1 | Jan2013, 10: | 1.19 |
| GEN-13 | 0.0084 | 4 | Jan2013, 10: | 1.34 |
| DS-POND | 2.974 | 515.1 | Jan2013, 10: | 1.06 |
| AR | 2.974 | 514.9 | Jan2013, 10: | 1.06 |
| GSC-POC | 2.974 | 514.9 | Jan2013, 10: | 1.06 |
| GEN-04-DS-POC | 0.0912 | 27.5 | Jan2013, 10: | 0.94 |
| GEN-01 | 0.0571 | 23.8 | Jan2013, 10: | 1.21 |
| GEN-01-POC | 0.0571 | 23.8 | Jan2013, 10: | 1.21 |
| GEN-05-POC | 0.054 | 18.4 | Jan2013, 10: | 1.18 |
| GEN-07 | 0.0196 | 9 | Jan2013, 10: | 1.21 |
| GEN-03 | 0.0401 | 16.9 | Jan2013, 10: | 1.18 |
| GEN-03-POC | 0.0401 | 16.9 | Jan2013, 10: | 1.18 |
| GEN-07-POC | 0.0196 | 9 | Jan2013, 10: | 1.21 |

| EXISTING 10-YEAR RESULTS | | | | |
|---|---|---|---|---|
| Element | Drainage Area (SqMi) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| GEN-05 | 0.054 | 36.2 | Jan2013, 10 | 2.25 |
| GEN-04-X | 0.0383 | 24.9 | Jan2013, 10 | 1.8 |
| GEN-04 | 0.0173 | 13.5 | Jan2013, 10 | 2.25 |
| GEN-04-US POC | 0.0173 | 13.5 | Jan2013, 10 | 2.25 |
| GEN-04-X-REAC | 0.0173 | 13.5 | Jan2013, 10 | 2.25 |
| GEN-04-JUNC | 0.0556 | 37.9 | Jan2013, 10 | 1.94 |
| GEN-04-Z-REAC | 0.0556 | 38 | Jan2013, 10 | 1.94 |
| GEN-04-Z | 0.0192 | 13.3 | Jan2013, 10 | 1.88 |
| GEN-04-Y | 0.0164 | 15.8 | Jan2013, 10 | 2.21 |
| GEN-12 | 2.6302 | 1122.7 | Jan2013, 10 | 2.04 |
| GEN-02 | 0.0401 | 34.8 | Jan2013, 10 | 2.29 |
| GEN-02-POC | 0.0401 | 34.8 | Jan2013, 10 | 2.29 |
| GEN-12-REACH | 0.0401 | 34.6 | Jan2013, 10 | 2.29 |
| GEN-12-POC | 2.6703 | 1148.7 | Jan2013, 10 | 2.04 |
| GEN-11-REACH | 2.6703 | 1144.1 | Jan2013, 10 | 2.04 |
| GEN-11 | 0.0326 | 29 | Jan2013, 10 | 2.28 |
| GEN-11-POC | 2.7029 | 1151.8 | Jan2013, 10 | 2.04 |
| GEN-14-REACH | 2.7029 | 1146.5 | Jan2013, 10 | 2.04 |
| GEN-08 | 0.045 | 36.5 | Jan2013, 10 | 2.25 |
| GEN-08-POC | 0.045 | 36.5 | Jan2013, 10 | 2.25 |
| GEN-10 | 0.0516 | 45.1 | Jan2013, 10 | 2.25 |
| GEN-10-REACH | 0.045 | 36.4 | Jan2013, 10 | 2.25 |
| GEN-14 | 0.0258 | 18.8 | Jan2013, 10 | 2.32 |
| US-POND | 2.8253 | 1162.9 | Jan2013, 10 | 2.05 |
| GEN-13-REACH | 2.8253 | 1162.3 | Jan2013, 10 | 2.05 |
| GEN-06 | 0.0909 | 61 | Jan2013, 10 | 2.23 |
| GEN-06-POC | 0.0909 | 61 | Jan2013, 10 | 2.23 |
| GEN-09-REACH | 0.0909 | 60.9 | Jan2013, 10 | 2.23 |
| GEN-09 | 0.0494 | 35.3 | Jan2013, 10 | 2.26 |
| GEN-13 | 0.0084 | 7.5 | Jan2013, 10 | 2.45 |
| DS-POND | 2.974 | 1200.3 | Jan2013, 10 | 2.06 |
| AR | 2.974 | 1200.1 | Jan2013, 10 | 2.06 |
| GSC-POC | 2.974 | 1200.1 | Jan2013, 10 | 2.06 |
| GEN-04-DS-POC | 0.0912 | 63.3 | Jan2013, 10 | 1.97 |
| GEN-01 | 0.0571 | 46.2 | Jan2013, 10 | 2.3 |
| GEN-01-POC | 0.0571 | 46.2 | Jan2013, 10 | 2.3 |
| GEN-05-POC | 0.054 | 36.2 | Jan2013, 10 | 2.25 |
| GEN-07 | 0.0196 | 17.5 | Jan2013, 10 | 2.29 |
| GEN-03 | 0.0401 | 33.4 | Jan2013, 10 | 2.25 |
| GEN-03-POC | 0.0401 | 33.4 | Jan2013, 10 | 2.25 |
| GEN-07-POC | 0.0196 | 17.5 | Jan2013, 10 | 2.29 |

| EXISTING 100-YEAR RESULTS | | | | |
|---|---|---|---|---|
| Element | Drainage Area (SqMi) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| GEN-05 | 0.054 | 58 | Jan2013, 10 | 3.54 |
| GEN-04-X | 0.0383 | 43.8 | Jan2013, 10 | 3.04 |
| GEN-04 | 0.0173 | 21.6 | Jan2013, 10 | 3.54 |
| GEN-04-US POC | 0.0173 | 21.6 | Jan2013, 10 | 3.54 |
| GEN-04-X-REAC | 0.0173 | 21.6 | Jan2013, 10 | 3.54 |
| GEN-04-JUNC | 0.0556 | 64.6 | Jan2013, 10 | 3.2 |
| GEN-04-Z-REAC | 0.0556 | 64.6 | Jan2013, 10 | 3.2 |
| GEN-04-Z | 0.0192 | 22.9 | Jan2013, 10 | 3.14 |
| GEN-04-Y | 0.0164 | 25.6 | Jan2013, 10 | 3.52 |
| GEN-12 | 2.6302 | 1837.3 | Jan2013, 10 | 3.27 |
| GEN-02 | 0.0401 | 55.3 | Jan2013, 10 | 3.58 |
| GEN-02-POC | 0.0401 | 55.3 | Jan2013, 10 | 3.58 |
| GEN-12-REACH | 0.0401 | 55.1 | Jan2013, 10 | 3.59 |
| GEN-12-POC | 2.6703 | 1878.2 | Jan2013, 10 | 3.27 |
| GEN-11-REACH | 2.6703 | 1870.8 | Jan2013, 10 | 3.27 |
| GEN-11 | 0.0326 | 46 | Jan2013, 10 | 3.57 |
| GEN-11-POC | 2.7029 | 1883.2 | Jan2013, 10 | 3.28 |
| GEN-14-REACH | 2.7029 | 1875.3 | Jan2013, 10 | 3.27 |
| GEN-08 | 0.045 | 58.3 | Jan2013, 10 | 3.54 |
| GEN-08-POC | 0.045 | 58.3 | Jan2013, 10 | 3.54 |
| GEN-10 | 0.0516 | 72.1 | Jan2013, 10 | 3.54 |
| GEN-10-REACH | 0.045 | 58.2 | Jan2013, 10 | 3.54 |
| GEN-14 | 0.0258 | 29.7 | Jan2013, 10 | 3.62 |
| US-POND | 2.8253 | 1901.9 | Jan2013, 10 | 3.28 |
| GEN-13-REACH | 2.8253 | 1901.5 | Jan2013, 10 | 3.28 |
| GEN-06 | 0.0909 | 97.7 | Jan2013, 10 | 3.53 |
| GEN-06-POC | 0.0909 | 97.7 | Jan2013, 10 | 3.53 |
| GEN-09-REACH | 0.0909 | 97.6 | Jan2013, 10 | 3.53 |
| GEN-09 | 0.0494 | 56.4 | Jan2013, 10 | 3.56 |
| GEN-13 | 0.0084 | 11.8 | Jan2013, 10 | 3.77 |
| DS-POND | 2.974 | 1972.5 | Jan2013, 10 | 3.29 |
| AR | 2.974 | 1972.2 | Jan2013, 10 | 3.29 |
| GSC-POC | 2.974 | 1972.2 | Jan2013, 10 | 3.29 |
| GEN-04-DS-POC | 0.0912 | 107.4 | Jan2013, 10 | 3.24 |
| GEN-01 | 0.0571 | 73.4 | Jan2013, 10 | 3.6 |
| GEN-01-POC | 0.0571 | 73.4 | Jan2013, 10 | 3.6 |
| GEN-05-POC | 0.054 | 58 | Jan2013, 10 | 3.54 |
| GEN-07 | 0.0196 | 27.7 | Jan2013, 10 | 3.58 |
| GEN-03 | 0.0401 | 53.3 | Jan2013, 10 | 3.55 |
| GEN-03-POC | 0.0401 | 53.3 | Jan2013, 10 | 3.55 |
| GEN-07-POC | 0.0196 | 27.7 | Jan2013, 10 | 3.58 |

# HEC-HMS - DEVELOPED CONDITIONS





# SHED AREA CHARACTERISTICS - DEVELOPED

DOMENICHELLI AND ASSOCIATES, INC.
CIVIL ENGINEERING

**1) Shed Area Description**

| SUB BASIN | Area Woods (%) | Area Pasture (%) | Area 1/3 AC lot (%) | Area 1/4 AC lot (%) | Area 1/8 AC lot (%) | Area Woods ($ft^2$) | Area Pasture ($ft^2$) | Area 1/3 AC lot ($ft^2$) | Area 1/4 AC lot ($ft^2$) | Area 1/8 AC lot ($ft^2$) | CN | Total Area ($ft^2$) | Total Area (AC) | Total Area (SqM) | Imp. Area ($ft^2$) | Percent Imperv (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GEN-01-A | 5% | 70% | 20% | 0% | 0% | 23500 | 326944 | 92986 | 0 | 0 | 84.3 | 469992 | 10.8 | 0.0169 | 26562 | 6% |
| GEN-01-B | 10% | 83% | 0% | 0% | 0% | 70613 | 584809 | 0 | 0 | 0 | 83.8 | 706128 | 16.2 | 0.0253 | 50706 | 7% |
| GEN-01-DS | 25% | 64% | 2% | 0% | 0% | 126766 | 326491 | 9308 | 0 | 0 | 83.5 | 507065 | 11.6 | 0.0182 | 44500 | 9% |
| GEN-02-A | 30% | 66% | 4% | 0% | 0% | 324761 | 719549 | 40885 | 0 | 0 | 83.5 | 1082538 | 24.9 | 0.0388 | 2000 | 0% |
| GEN-03-A | 5% | 29% | 0% | 49% | 0% | 32400 | 185088 | 0 | 319880 | 0 | 85.7 | 648008 | 14.9 | 0.0232 | 110640 | 17% |
| GEN-03-WL | 0% | 100% | 0% | 0% | 0% | 0 | 54762 | 0 | 0 | 0 | 84.0 | 54762 | 1.3 | 0.0020 | 0 | 0% |
| GEN-03-OS | 30% | 53% | 17% | 0% | 0% | 38819 | 68262 | 22317 | 0 | 0 | 83.7 | 129398 | 3.0 | 0.0046 | 0 | 0% |
| GEN-03-DS | 30% | 70% | 0% | 0% | 0% | 54964 | 128250 | 0 | 0 | 0 | 83.4 | 183214 | 4.2 | 0.0066 | 0 | 0% |
| GEN-04-A | 0% | 34% | 0% | 47% | 0% | 0 | 268471 | 0 | 376804 | 0 | 85.8 | 793835 | 18.2 | 0.0285 | 148560 | 19% |
| GEN-04-B | 5% | 77% | 0% | 18% | 0% | 17946 | 277648 | 0 | 63334 | 0 | 84.4 | 358928 | 8.2 | 0.0129 | 0 | 0% |
| GEN-04-C | 60% | 28% | 3% | 10% | 0% | 339270 | 156325 | 14905 | 54950 | 0 | 83.1 | 565450 | 13.0 | 0.0203 | 0 | 0% |
| GEN-04-DS | 80% | 11% | 0% | 0% | 0% | 257498 | 35704 | 0 | 0 | 0 | 82.2 | 321872 | 7.4 | 0.0115 | 28670 | 9% |
| GEN-04-Y | 50% | 0% | 0% | 50% | 0% | 228271 | 0 | 0 | 228271 | 0 | 84.5 | 456542 | 10.5 | 0.0164 | 74194 | 16% |
| GEN-05-A | 2% | 22% | 0% | 42% | 0% | 17088 | 190826 | 0 | 359479 | 0 | 85.8 | 854423 | 19.6 | 0.0306 | 287030 | 34% |
| GEN-05-DS | 40% | 55% | 4% | 0% | 0% | 324366 | 448557 | 36121 | 0 | 0 | 83.3 | 810914 | 18.6 | 0.0291 | 1870 | 0% |
| GEN-06-A | 0% | 23% | 0% | 55% | 0% | 0 | 197091 | 0 | 481567 | 0 | 86.1 | 873696 | 20.1 | 0.0313 | 195038 | 22% |
| GEN-06-B | 2% | 30% | 0% | 0% | 47% | 15389 | 232242 | 0 | 0 | 361923 | 88.7 | 769438 | 17.7 | 0.0276 | 159884 | 21% |
| GEN-06-C | 0% | 24% | 0% | 0% | 50% | 0 | 140521 | 0 | 0 | 290436 | 89.4 | 576240 | 13.2 | 0.0207 | 145283 | 25% |
| GEN-06-WL | 15% | 57% | 0% | 0% | 25% | 43557 | 164144 | 0 | 0 | 72899 | 85.8 | 290378 | 6.7 | 0.0104 | 9778 | 3% |
| GEN-06-DS | 25% | 75% | 0% | 0% | 0% | 18597 | 55791 | 0 | 0 | 0 | 83.5 | 74388 | 1.7 | 0.0027 | 0 | 0% |
| GEN-07-A | 10% | 76% | 12% | 0% | 0% | 12323 | 94252 | 14995 | 0 | 0 | 84.0 | 123230 | 2.8 | 0.0044 | 1660 | 1% |
| GEN-07-DS | 40% | 53% | 0% | 0% | 0% | 145610 | 192528 | 0 | 0 | 0 | 83.1 | 364025 | 8.4 | 0.0131 | 25887 | 7% |
| GEN-08-A | 15% | 21% | 0% | 39% | 0% | 110967 | 158135 | 0 | 288237 | 0 | 85.2 | 739782 | 17.0 | 0.0265 | 182443 | 25% |
| GEN-08-WL | 20% | 46% | 0% | 34% | 0% | 55208 | 127855 | 0 | 92978 | 0 | 84.6 | 276041 | 6.3 | 0.0099 | 0 | 0% |
| GEN-08-DS | 10% | 78% | 4% | 0% | 0% | 42076 | 327864 | 14877 | 0 | 0 | 83.9 | 420755 | 9.7 | 0.0151 | 35938 | 9% |
| GEN-09-A | 20% | 63% | 2% | 0% | 0% | 242809 | 770449 | 26958 | 0 | 0 | 83.6 | 1214044 | 27.9 | 0.0435 | 173828 | 14% |
| GEN-10-A | 10% | 75% | 7% | 0% | 0% | 142351 | 1065075 | 93006 | 0 | 0 | 83.9 | 1423509 | 32.7 | 0.0511 | 123077 | 9% |
| GEN-11-A | 60% | 25% | 3% | 0% | 0% | 656444 | 270865 | 29985 | 0 | 0 | 82.7 | 1094073 | 25.1 | 0.0392 | 136779 | 13% |
| GEN-12 | 31% | 41% | 0% | 24% | 0% | 22731268 | 30339335 | 0 | 17256068 | 0 | 79.0 | 73326671 | 1683.3 | 2.6302 | 3000000 | 4% |
| GEN-13-A | 5% | 81% | 7% | 0% | 0% | 10915 | 177247 | 14974 | 0 | 0 | 84.0 | 218302 | 5.0 | 0.0078 | 15166 | 7% |
| GEN-14-A | 5% | 88% | 0% | 0% | 0% | 33426 | 591490 | 0 | 0 | 0 | 83.9 | 668527 | 15.3 | 0.0240 | 43611 | 7% |

# DEVELOPED SHED LAG TIME CALCULATIONS

DOMENICHELLI AND ASSOCIATES, INC.
CIVIL ENGINEERING

**2) Lag Time**

| SUB BASIN | Travel Time | | | | | | | | | | | | | | | | | | Travel time | Lag time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Overland flow | | | | | Shallow Concentrated | | | | | | Channel flow | | | | | | | | |
| | Start Elev | End Elev | Length | Slope | time(min) | Start Elev | End Elev | Length | Slope | vel(fps) | time | Start Elev | End Elev | Length | slope | vel | time | | (min) | (min) |
| GEN-01-A | 1238 | 1222 | 300 | 0.053 | 15.7 | 1222 | 1222 | 0 | - | - | - | 1222 | 1182 | 437 | 0.0915 | 10.0 | 0.7 | | 16 | **9.9** |
| GEN-01-B | 1262 | 1238 | 300 | 0.080 | 13.3 | 1238 | 1155 | 1351 | 0.061 | 4.1 | 5.5 | 1155 | | 0 | - | - | - | | 19 | **11.3** |
| GEN-01-DS | 1230 | 1219 | 300 | 0.037 | 18.2 | 1219 | 1126 | 742 | 0.125 | 5.7 | 2.2 | 1126 | | 0 | - | - | - | | 20 | **12.2** |
| GEN-02-A | 1262 | 1230 | 300 | 0.107 | 11.9 | 1230 | 1149 | 1356 | 0.060 | 4.0 | 5.6 | 1149 | | 0 | - | - | - | | 18 | **10.5** |
| GEN-03-A | 1198 | 1197 | 50 | 0.020 | 5.5 | 1197 | 1191 | 292 | 0.021 | 2.2 | 2.2 | 1191 | 1104 | 1488 | 0.0585 | 10.0 | 2.5 | | 10 | **6.1** |
| GEN-03-WL | 1154 | 1123 | 300 | 0.103 | 12.0 | 1123 | 1020 | 898 | 0.115 | 5.4 | 2.8 | 1020 | | 0 | - | - | - | | 15 | **8.9** |
| GEN-03-OS | 1183.5 | 1180 | 100 | 0.035 | 7.7 | 1180 | 1020 | 1644 | 0.097 | 5.1 | 5.4 | 1020 | | 0 | - | - | - | | 13 | **7.9** |
| GEN-03-DS | 1105 | 1094 | 300 | 0.037 | 12.5 | 1094 | 1020 | 540 | 0.137 | 5.9 | 1.5 | 1020 | | 0 | - | - | - | | 14 | **8.4** |
| GEN-04-A | 1150.5 | 1141.5 | 100 | 0.090 | 3.6 | 1142 | 1121 | 369 | 0.056 | 3.9 | 1.6 | 1121 | 1082 | 1428 | 0.0273 | 13.8 | 1.7 | | 7 | **4.2** |
| GEN-04-B | 1092 | 1077 | 301 | 0.050 | 11.1 | 1077 | 1065 | 910 | 0.013 | 1.7 | 9.0 | 1065 | 1032 | 0 | - | - | - | | 20 | **12.1** |
| GEN-04-C | 1102 | 1080 | 100 | 0.220 | 2.5 | 1080 | 1035 | 1183 | 0.038 | 3.2 | 6.2 | 1035 | 945 | 0 | - | - | - | | 9 | **5.3** |
| GEN-04-DS | 1105 | 1077 | 300 | 0.093 | 12.5 | 1077 | 840 | 633 | 0.374 | 9.9 | 1.1 | 840 | | 0 | - | - | - | | 14 | **8.2** |
| GEN-04-OS | 1105 | 1090 | 170 | 0.088 | 8.1 | 1090 | 1050 | 386 | 0.104 | 5.2 | 1.2 | 1050 | 840 | 1630 | 0.1288 | 10.0 | 2.7 | | 12 | **7.3** |
| GEN-05-A | 1184.5 | 1182.25 | 115 | 0.020 | 10.8 | 1182 | 1165 | 397 | 0.043 | 3.4 | 1.9 | 1165 | 1145 | 1078 | 0.0186 | 11.4 | 1.6 | | 14 | **8.6** |
| GEN-05-DS | 1126 | 1090 | 197 | 0.183 | 6.9 | 1090 | 960 | 1210 | 0.107 | 5.3 | 3.8 | 960 | | 0 | - | - | - | | 11 | **6.4** |
| GEN-06-A | 1192 | 1190 | 100 | 0.020 | 6.6 | 1190 | 1174 | 321 | 0.050 | 3.7 | 1.5 | 1174 | 1095 | 1621 | 0.0487 | 18.5 | 1.5 | | 10 | **5.7** |
| GEN-06-B | 1215 | 1213 | 100 | 0.020 | 6.6 | 1213 | 1202 | 610 | 0.018 | 2.0 | 5.0 | 1202 | 1143 | 1105 | 0.0534 | 19.4 | 1.0 | | 13 | **7.6** |
| GEN-06-C | 1184 | 1178 | 100 | 0.060 | 4.3 | 1178 | 1175 | 308 | 0.010 | 1.4 | 3.6 | 1175 | 1100 | 1157 | 0.0648 | 21.3 | 0.9 | | 9 | **5.3** |
| GEN-06-WL | 1174 | 1172 | 100 | 0.020 | 6.6 | 1172 | 1087 | 1066 | 0.080 | 4.6 | 3.8 | 1087 | | 0 | - | - | - | | 10 | **6.3** |
| GEN-06-DS | 1128 | 1106 | 300 | 0.073 | 9.5 | 1106 | 1073 | 276 | 0.120 | 5.5 | 0.8 | 1073 | | 0 | - | - | - | | 10 | **6.2** |
| GEN-07-A | 1137 | 1126 | 39 | 0.282 | 1.1 | 1126 | 1103 | 323 | 0.071 | 4.4 | 1.2 | 1103 | | 0 | - | - | - | | 2 | **1.4** |
| GEN-07-DS | 1131 | 1110 | 300 | 0.070 | 9.7 | 1110 | 1040 | 703 | 0.100 | 5.1 | 2.3 | 1040 | | 0 | - | - | - | | 12 | **7.2** |
| GEN-08-A | 1226 | 1224 | 100 | 0.020 | 6.6 | 1224 | 1209 | 443 | 0.034 | 3.0 | 2.5 | 1209 | 1135 | 1601 | 0.0462 | 18.0 | 1.5 | | 11 | **6.4** |
| GEN-08-WL | 1211 | 1197 | 100 | 0.140 | 3.0 | 1197 | 1110 | 956 | 0.091 | 4.9 | 3.2 | 1110 | | 0 | - | - | - | | 6 | **3.8** |
| GEN-08-DS | 1211 | 1187 | 300 | 0.080 | 9.2 | 1187 | 1159 | 242 | 0.116 | 5.5 | 0.7 | 1159 | 1078 | 796 | 0.1018 | 10.0 | 1.3 | | 11 | **6.7** |
| GEN-09-A | 1127 | 1107 | 300 | 0.067 | 9.9 | 1107 | 975 | 1761 | 0.075 | 4.5 | 6.5 | 975 | 974 | 393 | 0.0025 | 4.2 | 1.5 | | 18 | **10.8** |
| GEN-10-A | 1078 | 1052 | 300 | 0.087 | 8.9 | 1052 | 985 | 1117 | 0.060 | 4.0 | 4.6 | 985 | 980 | 844 | 0.0059 | 6.4 | 2.2 | | 16 | **9.4** |
| GEN-11-A | 1166 | 1159 | 100 | 0.070 | 4.0 | 1159 | 993 | 1106 | 0.150 | 6.2 | 3.0 | 993 | 990 | 295 | 0.0102 | 8.4 | 0.6 | | 8 | **4.5** |
| GEN-12 | 1445 | 1443 | 100 | 0.020 | 9.6 | 1443 | 1295 | 904 | 0.164 | 6.5 | 2.3 | 1295 | 1150 | 4750 | 0.0305 | 5.1 | 15.6 | | 28 | - |
| | | | | | | | | | | | | 1150 | 1020 | 6700 | 0.0194 | 6.8 | 16.5 | | 16 | - |
| | | | | | | | | | | | | 1020 | 990 | 3000 | 0.0100 | 4.9 | 10.3 | | 10 | **32.6** |
| GEN-13-A | 983.5 | 982 | 100 | 0.020 | 6.6 | 982 | 976 | 441 | 0.014 | 1.7 | 4.3 | 976 | 974 | 166 | 0.0120 | 9.2 | 0.3 | | 11 | **6.7** |
| GEN-14-A | 1034 | 1033 | 100 | 0.020 | 6.6 | 1033 | 984 | 970 | 0.051 | 3.7 | 4.4 | 984 | 980 | 844 | 0.0047 | 5.8 | 2.4 | | 13 | **8.1** |

Overland time per equation 3-3 TR 55: n=0.24 or 0.15, p=7.0, Max L=300, Tt=( .007(nL)^.8)/((P)^.5 (s)^.4)

Shallow concentrated flow velocity based on Figure 3-1, TR-55: Length(ft) = 2000 max

Channel flow based on Manning's equation

Lag time = total travel time x 0.6

**3) Reaches**

| Reach | US ELV | DS ELV | LENGTH | SLOPE | N VALUE | xH:1v | BOTTOM WIDTH | CELERITY |
|---|---|---|---|---|---|---|---|---|
| GEN-03-DS-REACH | 1095 | 1020 | 574 | 0.131 | 0.06 | 6.5 | | 5 |
| GEN-04-X-REACH | 1070 | 932 | 836 | 0.165 | 0.06 | 3 | | 5 |
| GEN-04-Z-REACH | 932 | 840 | 937 | 0.098 | 0.06 | 3 | | 5 |
| GEN-05-DS-REACH | 1094 | 960 | 1242 | 0.108 | 0.06 | 4 | | 5 |
| GEN-06-WL-REACH | 1143 | 1085 | 957 | 0.061 | 0.06 | 6 | | 5 |
| GEN-06-DS-REACH | 1085 | 1073 | 231 | 0.052 | 0.06 | 6.5 | | 5 |
| GEN-07-A-REACH | 1105 | 1100 | 400 | 0.013 | 0.06 | 3 | 3 | 5 |
| GEN-07-DS-REACH | 1100 | 1040 | 2137 | 0.028 | 0.06 | 5.5 | | 5 |
| GEN-08-DS-REACH | 1122 | 1078 | 570 | 0.077 | 0.06 | 3.6 | | 5 |
| GEN-09-REACH | 1073 | 974 | 2137 | 0.046 | 0.06 | 5 | | 5 |
| GEN-10-REACH | 1078 | 980 | 2216 | 0.044 | 0.06 | 3.5 | | 5 |
| GEN-11-REACH | 997 | 991 | 1004 | 0.006 | 0.06 | 15 | 15 | 5 |
| GEN-12-REACH | 1149 | 997 | 3988 | 0.038 | 0.06 | 10 | 15 | 5 |
| GEN-13-REACH | 980 | 974 | 546 | 0.011 | 0.06 | 6 | 15 | 5 |
| GEN-14-REACH | 991 | 980 | 1568 | 0.007 | 0.06 | 12 | 15 | 5 |

# HEC-HMS DEVELOPED CONDITIONS

## GLOBAL SUMMARY RESULTS

PROPOSED 2-YEAR RESULTS

| Element | Drainage Area (SqMi) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
|---|---|---|---|---|
| GEN-05-BASIN | 0.0306 | 4.8 | Jan2013, 10 | 1.57 |
| GEN-06-A-BASI | 0.052 | 18.4 | Jan2013, 10 | 1.34 |
| GEN-06-B-BASI | 0.0276 | 2.1 | Jan2013, 11 | 1.5 |
| GEN-12 | 2.6302 | 555.6 | Jan2013, 10 | 1.04 |
| GEN-02-A | 0.0388 | 16.7 | Jan2013, 10 | 1.16 |
| GEN-02-POC | 0.0388 | 16.7 | Jan2013, 10 | 1.16 |
| GEN-12-REACH | 0.0388 | 16.5 | Jan2013, 10 | 1.16 |
| GEN-12-POC | 2.669 | 568.5 | Jan2013, 10 | 1.04 |
| GEN-11-REACH | 2.669 | 566.1 | Jan2013, 10 | 1.04 |
| GEN-11-A | 0.0392 | 22.9 | Jan2013, 09 | 1.27 |
| GEN-11-POC | 2.7082 | 570.1 | Jan2013, 10 | 1.05 |
| GEN-14-REACH | 2.7082 | 567.2 | Jan2013, 10 | 1.05 |
| GEN-08-BASIN | 0.0265 | 6.1 | Jan2013, 10 | 1.25 |
| GEN-08-A | 0.0265 | 14.3 | Jan2013, 10 | 1.27 |
| GEN-08-JUNC | 0.0364 | 9.1 | Jan2013, 09 | 1.16 |
| GEN-08-DS-REA | 0.0364 | 9.1 | Jan2013, 10 | 1.16 |
| GEN-08-WL | 0.0099 | 4.4 | Jan2013, 09 | 0.92 |
| GEN-08-DS | 0.0151 | 6.3 | Jan2013, 10 | 1 |
| GEN-08-POC | 0.0515 | 15.4 | Jan2013, 10 | 1.12 |
| GEN-10-REACH | 0.0515 | 15.4 | Jan2013, 10 | 1.12 |
| GEN-10-A | 0.0511 | 24.9 | Jan2013, 10 | 1.27 |
| GEN-14-A | 0.024 | 12.1 | Jan2013, 10 | 1.25 |
| US-POND | 2.8348 | 565.8 | Jan2013, 10 | 1.05 |
| GEN-13-REACH | 2.8348 | 565.4 | Jan2013, 10 | 1.05 |
| GEN-06-A | 0.0313 | 17.7 | Jan2013, 09 | 1.27 |
| GEN-06-C | 0.0207 | 13.8 | Jan2013, 09 | 1.47 |
| GEN-06-B | 0.0276 | 16.3 | Jan2013, 10 | 1.39 |
| GEN-06-WL-REA | 0.0276 | 2.1 | Jan2013, 11 | 1.5 |
| GEN-06-WL | 0.0104 | 4.7 | Jan2013, 10 | 1.03 |
| GEN-06-JUNC | 0.09 | 23.6 | Jan2013, 10 | 1.35 |
| GEN-06-DS-REA | 0.09 | 23.6 | Jan2013, 10 | 1.35 |
| GEN-06-DS | 0.0027 | 1.4 | Jan2013, 09 | 1.16 |
| GEN-06-POC | 0.0927 | 24.7 | Jan2013, 10 | 1.35 |

PROPOSED 10-YEAR RESULTS

| Element | Drainage Area (SqMi) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
|---|---|---|---|---|
| GEN-05-BASIN | 0.0306 | 12.6 | Jan2013, 10 | 2.74 |
| GEN-06-A-BASI | 0.052 | 38.3 | Jan2013, 10 | 2.5 |
| GEN-06-B-BASI | 0.0276 | 2.9 | Jan2013, 12 | 2.49 |
| GEN-12 | 2.6302 | 1122.7 | Jan2013, 10 | 2.04 |
| GEN-02-A | 0.0388 | 33 | Jan2013, 10 | 2.23 |
| GEN-02-POC | 0.0388 | 33 | Jan2013, 10 | 2.23 |
| GEN-12-REACH | 0.0388 | 32.7 | Jan2013, 10 | 2.23 |
| GEN-12-POC | 2.669 | 1147.4 | Jan2013, 10 | 2.04 |
| GEN-11-REACH | 2.669 | 1142.8 | Jan2013, 10 | 2.04 |
| GEN-11-A | 0.0392 | 43.5 | Jan2013, 09 | 2.35 |
| GEN-11-POC | 2.7082 | 1150.4 | Jan2013, 10 | 2.05 |
| GEN-14-REACH | 2.7082 | 1145.1 | Jan2013, 10 | 2.04 |
| GEN-08-BASIN | 0.0265 | 8.7 | Jan2013, 10 | 2.38 |
| GEN-08-A | 0.0265 | 28.3 | Jan2013, 09 | 2.39 |
| GEN-08-JUNC | 0.0364 | 16.8 | Jan2013, 09 | 2.27 |
| GEN-08-DS-REA | 0.0364 | 16.8 | Jan2013, 10 | 2.27 |
| GEN-08-WL | 0.0099 | 10 | Jan2013, 09 | 1.98 |
| GEN-08-DS | 0.0151 | 13.9 | Jan2013, 10 | 2.06 |
| GEN-08-POC | 0.0515 | 30.7 | Jan2013, 10 | 2.21 |
| GEN-10-REACH | 0.0515 | 30.6 | Jan2013, 10 | 2.21 |
| GEN-10-A | 0.0511 | 47.7 | Jan2013, 10 | 2.36 |
| GEN-14-A | 0.024 | 23.3 | Jan2013, 10 | 2.34 |
| US-POND | 2.8348 | 1158.3 | Jan2013, 10 | 2.05 |
| GEN-13-REACH | 2.8348 | 1157.5 | Jan2013, 10 | 2.05 |
| GEN-06-A | 0.0313 | 34.8 | Jan2013, 09 | 2.4 |
| GEN-06-C | 0.0207 | 25.5 | Jan2013, 09 | 2.66 |
| GEN-06-B | 0.0276 | 30.8 | Jan2013, 10 | 2.57 |
| GEN-06-WL-REA | 0.0276 | 2.9 | Jan2013, 12 | 2.49 |
| GEN-06-WL | 0.0104 | 10.2 | Jan2013, 09 | 2.12 |
| GEN-06-JUNC | 0.09 | 48.4 | Jan2013, 10 | 2.45 |
| GEN-06-DS-REA | 0.09 | 48.4 | Jan2013, 10 | 2.45 |
| GEN-06-DS | 0.0027 | 2.7 | Jan2013, 09 | 2.23 |
| GEN-06-POC | 0.0927 | 50.6 | Jan2013, 10 | 2.44 |

PROPOSED 100-YEAR RESULTS

| Element | Drainage Area (SqMi) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
|---|---|---|---|---|
| GEN-05-BASIN | 0.0306 | 23.9 | Jan2013, 10 | 4.11 |
| GEN-06-A-BASI | 0.052 | 57.8 | Jan2013, 10 | 3.85 |
| GEN-06-B-BASI | 0.0276 | 6.2 | Jan2013, 11 | 3.46 |
| GEN-12 | 2.6302 | 1837.3 | Jan2013, 10 | 3.27 |
| GEN-02-A | 0.0388 | 52.8 | Jan2013, 10 | 3.52 |
| GEN-02-POC | 0.0388 | 52.8 | Jan2013, 10 | 3.52 |
| GEN-12-REACH | 0.0388 | 52.7 | Jan2013, 10 | 3.52 |
| GEN-12-POC | 2.669 | 1876.5 | Jan2013, 10 | 3.27 |
| GEN-11-REACH | 2.669 | 1869 | Jan2013, 10 | 3.27 |
| GEN-11-A | 0.0392 | 68.5 | Jan2013, 09 | 3.65 |
| GEN-11-POC | 2.7082 | 1881 | Jan2013, 10 | 3.28 |
| GEN-14-REACH | 2.7082 | 1873.1 | Jan2013, 10 | 3.27 |
| GEN-08-BASIN | 0.0265 | 14.9 | Jan2013, 10 | 3.71 |
| GEN-08-A | 0.0265 | 44.8 | Jan2013, 09 | 3.72 |
| GEN-08-JUNC | 0.0364 | 25.3 | Jan2013, 09 | 3.59 |
| GEN-08-DS-REA | 0.0364 | 25.3 | Jan2013, 09 | 3.59 |
| GEN-08-WL | 0.0099 | 16.8 | Jan2013, 09 | 3.26 |
| GEN-08-DS | 0.0151 | 23.2 | Jan2013, 10 | 3.35 |
| GEN-08-POC | 0.0515 | 48.4 | Jan2013, 09 | 3.52 |
| GEN-10-REACH | 0.0515 | 48.3 | Jan2013, 10 | 3.52 |
| GEN-10-A | 0.0511 | 75.1 | Jan2013, 10 | 3.67 |
| GEN-14-A | 0.024 | 36.8 | Jan2013, 10 | 3.65 |
| US-POND | 2.8348 | 1898.1 | Jan2013, 10 | 3.29 |
| GEN-13-REACH | 2.8348 | 1897.6 | Jan2013, 10 | 3.29 |
| GEN-06-A | 0.0313 | 54.9 | Jan2013, 09 | 3.75 |
| GEN-06-C | 0.0207 | 38.8 | Jan2013, 09 | 4.04 |
| GEN-06-B | 0.0276 | 47.4 | Jan2013, 10 | 3.94 |
| GEN-06-WL-REA | 0.0276 | 6.2 | Jan2013, 11 | 3.45 |
| GEN-06-WL | 0.0104 | 16.8 | Jan2013, 09 | 3.43 |
| GEN-06-JUNC | 0.09 | 72.6 | Jan2013, 10 | 3.68 |
| GEN-06-DS-REA | 0.09 | 72.4 | Jan2013, 10 | 3.68 |
| GEN-06-DS | 0.0027 | 4.3 | Jan2013, 09 | 3.52 |
| GEN-06-POC | 0.0927 | 75.6 | Jan2013, 10 | 3.68 |

# HEC-HMS DEVELOPED CONDITIONS

## GLOBAL SUMMARY RESULTS

PROPOSED 2-YEAR RESULTS

| Element | Drainage Area (SqMi) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
|---|---|---|---|---|
| GEN-09-REACH | 0.0927 | 24.7 | Jan2013, 10 | 1.35 |
| GEN-09-A | 0.0435 | 20.8 | Jan2013, 10 | 1.31 |
| GEN-13-A | 0.0078 | 4.2 | Jan2013, 10 | 1.25 |
| DS-POND | 2.9788 | 509.9 | Jan2013, 10 | 1.07 |
| AR | 2.9788 | 509.7 | Jan2013, 10 | 1.07 |
| GSC-POC | 2.9788 | 509.7 | Jan2013, 10 | 1.07 |
| GEN-05-A | 0.0306 | 19.1 | Jan2013, 10 | 1.58 |
| GEN-05-DS-REA | 0.0306 | 4.8 | Jan2013, 10 | 1.57 |
| GEN-05-DS | 0.0291 | 14.5 | Jan2013, 10 | 1.15 |
| GEN-04-BASIN | 0.0285 | 3.2 | Jan2013, 10 | 1.21 |
| GEN-04-A | 0.0285 | 16.4 | Jan2013, 09 | 1.22 |
| GEN-04-DS-REA | 0.0285 | 3.2 | Jan2013, 10 | 1.21 |
| GEN-04-B | 0.0129 | 5.4 | Jan2013, 10 | 1.2 |
| GEN-04-DITCH | 0.0414 | 8.4 | Jan2013, 10 | 1.21 |
| GEN-04-DS-REA | 0.0414 | 8.4 | Jan2013, 10 | 1.21 |
| GEN-04-C | 0.0203 | 10.5 | Jan2013, 09 | 1.14 |
| GEN-04-Y | 0.0164 | 7.6 | Jan2013, 10 | 1.12 |
| GEN-04-DS | 0.0115 | 4 | Jan2013, 10 | 0.92 |
| GEN-04-DS-POC | 0.0896 | 27.7 | Jan2013, 10 | 1.14 |
| GEN-05-POC | 0.0597 | 17.5 | Jan2013, 10 | 1.37 |
| GEN-07-DS | 0.0131 | 5 | Jan2013, 10 | 0.94 |
| GEN-07-A | 0.0044 | 2.7 | Jan2013, 09 | 1.19 |
| GEN-07-A-REAC | 0.0044 | 2.7 | Jan2013, 09 | 1.19 |
| GEN-07-JUNC | 0.0044 | 2.7 | Jan2013, 09 | 1.19 |
| GEN-07-DS-REA | 0.0044 | 2.6 | Jan2013, 10 | 1.19 |
| GEN-03-BASIN | 0.0232 | 6.3 | Jan2013, 10 | 1.38 |
| GEN-03-A | 0.0232 | 14.4 | Jan2013, 09 | 1.41 |
| GEN-03-DS-REA | 0.0232 | 6.3 | Jan2013, 10 | 1.38 |
| GEN-03-DS | 0.0066 | 3.1 | Jan2013, 10 | 1.16 |
| GEN-03-OS | 0.0046 | 2.2 | Jan2013, 10 | 1.17 |
| GEN-03-WL | 0.002 | 0.7 | Jan2013, 10 | 0.89 |
| GEN-01-B | 0.0253 | 11.3 | Jan2013, 10 | 1.24 |
| GEN-01-DS | 0.0182 | 7.9 | Jan2013, 10 | 1.25 |
| GEN-01-BASIN | 0.0169 | 7.4 | Jan2013, 00 | 1.52 |
| GEN-01-A | 0.0169 | 8 | Jan2013, 10 | 1.25 |
| GEN-01-POC | 0.0604 | 23.7 | Jan2013, 10 | 1.32 |
| GEN-03-POC | 0.0364 | 11.5 | Jan2013, 10 | 1.29 |
| GEN-07-POC | 0.0175 | 7.3 | Jan2013, 10 | 1 |

PROPOSED 10-YEAR RESULTS

| Element | Drainage Area (SqMi) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
|---|---|---|---|---|
| GEN-09-REACH | 0.0927 | 50.6 | Jan2013, 10 | 2.44 |
| GEN-09-A | 0.0435 | 39.1 | Jan2013, 10 | 2.41 |
| GEN-13-A | 0.0078 | 8 | Jan2013, 10 | 2.34 |
| DS-POND | 2.9788 | 1185.3 | Jan2013, 10 | 2.07 |
| AR | 2.9788 | 1185.2 | Jan2013, 10 | 2.07 |
| GSC-POC | 2.9788 | 1185.2 | Jan2013, 10 | 2.07 |
| GEN-05-A | 0.0306 | 33.7 | Jan2013, 10 | 2.75 |
| GEN-05-DS-REA | 0.0306 | 12.6 | Jan2013, 10 | 2.74 |
| GEN-05-DS | 0.0291 | 28.7 | Jan2013, 09 | 2.22 |
| GEN-04-BASIN | 0.0285 | 8.6 | Jan2013, 10 | 2.34 |
| GEN-04-A | 0.0285 | 32.8 | Jan2013, 09 | 2.34 |
| GEN-04-DS-REA | 0.0285 | 8.6 | Jan2013, 10 | 2.34 |
| GEN-04-B | 0.0129 | 10.6 | Jan2013, 10 | 2.28 |
| GEN-04-DITCH | 0.0414 | 18.1 | Jan2013, 10 | 2.32 |
| GEN-04-DS-REA | 0.0414 | 18.4 | Jan2013, 10 | 2.32 |
| GEN-04-C | 0.0203 | 20.8 | Jan2013, 09 | 2.21 |
| GEN-04-Y | 0.0164 | 15.8 | Jan2013, 10 | 2.21 |
| GEN-04-DS | 0.0115 | 9.3 | Jan2013, 10 | 1.94 |
| GEN-04-DS-POC | 0.0896 | 56.2 | Jan2013, 10 | 2.23 |
| GEN-05-POC | 0.0597 | 33.1 | Jan2013, 10 | 2.49 |
| GEN-07-DS | 0.0131 | 11.3 | Jan2013, 10 | 1.97 |
| GEN-07-A | 0.0044 | 5.3 | Jan2013, 09 | 2.27 |
| GEN-07-A-REAC | 0.0044 | 5.3 | Jan2013, 09 | 2.27 |
| GEN-07-JUNC | 0.0044 | 5.3 | Jan2013, 09 | 2.27 |
| GEN-07-DS-REA | 0.0044 | 5.2 | Jan2013, 10 | 2.27 |
| GEN-03-BASIN | 0.0232 | 9 | Jan2013, 10 | 2.52 |
| GEN-03-A | 0.0232 | 26.5 | Jan2013, 09 | 2.55 |
| GEN-03-DS-REA | 0.0232 | 9 | Jan2013, 10 | 2.52 |
| GEN-03-DS | 0.0066 | 6 | Jan2013, 10 | 2.22 |
| GEN-03-OS | 0.0046 | 4.3 | Jan2013, 10 | 2.24 |
| GEN-03-WL | 0.002 | 1.6 | Jan2013, 10 | 1.93 |
| GEN-01-B | 0.0253 | 21.8 | Jan2013, 10 | 2.33 |
| GEN-01-DS | 0.0182 | 15.2 | Jan2013, 10 | 2.34 |
| GEN-01-BASIN | 0.0169 | 7.5 | Jan2013, 10 | 2.62 |
| GEN-01-A | 0.0169 | 15.5 | Jan2013, 10 | 2.35 |
| GEN-01-POC | 0.0604 | 43.5 | Jan2013, 10 | 2.41 |
| GEN-03-POC | 0.0364 | 19.8 | Jan2013, 10 | 2.4 |
| GEN-07-POC | 0.0175 | 16 | Jan2013, 10 | 2.05 |

PROPOSED 100-YEAR RESULTS

| Element | Drainage Area (SqMi) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
|---|---|---|---|---|
| GEN-09-REACH | 0.0927 | 75.4 | Jan2013, 10 | 3.67 |
| GEN-09-A | 0.0435 | 61.2 | Jan2013, 10 | 3.72 |
| GEN-13-A | 0.0078 | 12.6 | Jan2013, 10 | 3.65 |
| DS-POND | 2.9788 | 1950.9 | Jan2013, 10 | 3.3 |
| AR | 2.9788 | 1950.6 | Jan2013, 10 | 3.3 |
| GSC-POC | 2.9788 | 1950.6 | Jan2013, 10 | 3.3 |
| GEN-05-A | 0.0306 | 50.9 | Jan2013, 10 | 4.11 |
| GEN-05-DS-REA | 0.0306 | 23.9 | Jan2013, 10 | 4.11 |
| GEN-05-DS | 0.0291 | 46 | Jan2013, 09 | 3.5 |
| GEN-04-BASIN | 0.0285 | 16.3 | Jan2013, 10 | 3.67 |
| GEN-04-A | 0.0285 | 52.2 | Jan2013, 09 | 3.68 |
| GEN-04-DS-REA | 0.0285 | 16.3 | Jan2013, 10 | 3.67 |
| GEN-04-B | 0.0129 | 16.9 | Jan2013, 10 | 3.59 |
| GEN-04-DITCH | 0.0414 | 32.7 | Jan2013, 10 | 3.64 |
| GEN-04-DS-REA | 0.0414 | 32.7 | Jan2013, 10 | 3.64 |
| GEN-04-C | 0.0203 | 33.3 | Jan2013, 09 | 3.49 |
| GEN-04-Y | 0.0164 | 25.6 | Jan2013, 10 | 3.52 |
| GEN-04-DS | 0.0115 | 15.8 | Jan2013, 10 | 3.21 |
| GEN-04-DS-POC | 0.0896 | 97.7 | Jan2013, 10 | 3.53 |
| GEN-05-POC | 0.0597 | 55.3 | Jan2013, 10 | 3.81 |
| GEN-07-DS | 0.0131 | 19.1 | Jan2013, 10 | 3.25 |
| GEN-07-A | 0.0044 | 8.5 | Jan2013, 09 | 3.57 |
| GEN-07-A-REAC | 0.0044 | 8.4 | Jan2013, 09 | 3.57 |
| GEN-07-JUNC | 0.0044 | 8.4 | Jan2013, 09 | 3.57 |
| GEN-07-DS-REA | 0.0044 | 8.3 | Jan2013, 10 | 3.57 |
| GEN-03-BASIN | 0.0232 | 20.7 | Jan2013, 10 | 3.87 |
| GEN-03-A | 0.0232 | 40.8 | Jan2013, 09 | 3.9 |
| GEN-03-DS-REA | 0.0232 | 20.7 | Jan2013, 10 | 3.87 |
| GEN-03-DS | 0.0066 | 9.7 | Jan2013, 10 | 3.51 |
| GEN-03-OS | 0.0046 | 6.9 | Jan2013, 10 | 3.53 |
| GEN-03-WL | 0.002 | 2.7 | Jan2013, 10 | 3.21 |
| GEN-01-B | 0.0253 | 34.4 | Jan2013, 10 | 3.64 |
| GEN-01-DS | 0.0182 | 24 | Jan2013, 10 | 3.65 |
| GEN-01-BASIN | 0.0169 | 12.1 | Jan2013, 10 | 3.93 |
| GEN-01-A | 0.0169 | 24.4 | Jan2013, 10 | 3.66 |
| GEN-01-POC | 0.0604 | 66.8 | Jan2013, 10 | 3.72 |
| GEN-03-POC | 0.0364 | 36.8 | Jan2013, 10 | 3.72 |
| GEN-07-POC | 0.0175 | 26.7 | Jan2013, 10 | 3.33 |

# SUMMARY OF COMPLIANCE POINTS

DOMENICHELLI AND ASSOCIATES, INC.
CIVIL ENGINEERING

**1) Existing Flows (CFS)**

| | GEN-01-POC | GEN-02-POC | GEN-03-POC | GEN-04-DS-POC | GEN-04-US POC | GEN-05-POC | GEN-06-POC | GEN-07-POC | GEN-08-POC | GEN-11-POC | GEN-12-POC | US-POND | GSP-POC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2YR | 23.8 | 17.9 | 16.9 | 27.5 | 6.8 | 18.4 | 30.8 | 9.0 | 18.5 | 570.9 | 569.4 | 571.4 | 543.4 |
| 10YR | 46.2 | 34.8 | 33.4 | 63.3 | 13.5 | 36.2 | 61.0 | 17.5 | 36.5 | 1151.8 | 1148.7 | 1152.4 | 1243.6 |
| 100YR | 73.4 | 55.3 | 53.3 | 107.4 | 21.6 | 58.0 | 97.7 | 27.7 | 58.3 | 1883.2 | 1878.2 | 1883.7 | 2040.7 |

**2) Proposed Flows (CFS)**

| | GEN-01-POC | GEN-02-POC | GEN-03-POC | GEN-04-DS-POC | GEN-04-Basin | GEN-05-POC | GEN-06-POC | GEN-07-POC | GEN-08-POC | GEN-11-POC | GEN-12-POC | US-POND | GSP-POC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2YR | 23.7 | 16.7 | 11.5 | 27.7 | 3.2 | 17.5 | 24.7 | 7.3 | 15.4 | 570.1 | 568.5 | 570.3 | 513.7 |
| 10YR | 43.5 | 33.0 | 19.8 | 56.2 | 8.6 | 33.1 | 50.6 | 16.0 | 30.7 | 1150.4 | 1147.4 | 1150.8 | 1171.8 |
| 100YR | 66.8 | 52.8 | 36.8 | 97.7 | 16.3 | 55.3 | 75.6 | 26.7 | 48.4 | 1881.0 | 1876.5 | 1881.4 | 1950.7 |

**3) Proposed Flow as a Perctange of Existing Flows**

| | GEN-01-POC | GEN-02-POC | GEN-03-POC | GEN-04-POC | GEN-04-Basin | GEN-05-POC | GEN-06-POC | GEN-07-POC | GEN-08-POC | GEN-11-POC | GEN-12-POC | US-POND | DS-POND |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2YR | 99.6% | 93.3% | 68.0% | 100.7% | 47.1% | 95.1% | 80.2% | 81.1% | 83.2% | 99.9% | 99.8% | 99.8% | 94.5% |
| 10YR | 94.2% | 94.8% | 59.3% | 88.8% | 63.7% | 91.4% | 83.0% | 91.4% | 84.1% | 99.9% | 99.9% | 99.9% | 94.2% |
| 100YR | 91.0% | 95.5% | 69.0% | 91.0% | 75.5% | 95.3% | 77.4% | 96.4% | 83.0% | 99.9% | 99.9% | 99.9% | 95.6% |

**4) Proposed Basin Elevation Data**

| | PEAK ELV | SPILLWAY | TOP | Freeboard |
|---|---|---|---|---|
| BASIN 1 | 1182.1 | 1183.0 | 1185.0 | 0.9 |
| BASIN 3 | 1090.8 | 1093.0 | 1095.0 | 2.2 |
| BASIN 4 | 1087.2 | 1088.3 | 1090.3 | 1.1 |
| BASIN 5 | 1118.7 | 1118.8 | 1120.8 | 0.1 |
| BASIN 6A | 1102.4 | 1103.0 | 1107.0 | 0.6 |
| BASIN 6B | 1149.2 | 1150.0 | 1152.0 | 0.8 |
| BASIN 8 | 1133.6 | 1135.0 | 1137.0 | 1.4 |

NAVD 88 Feet

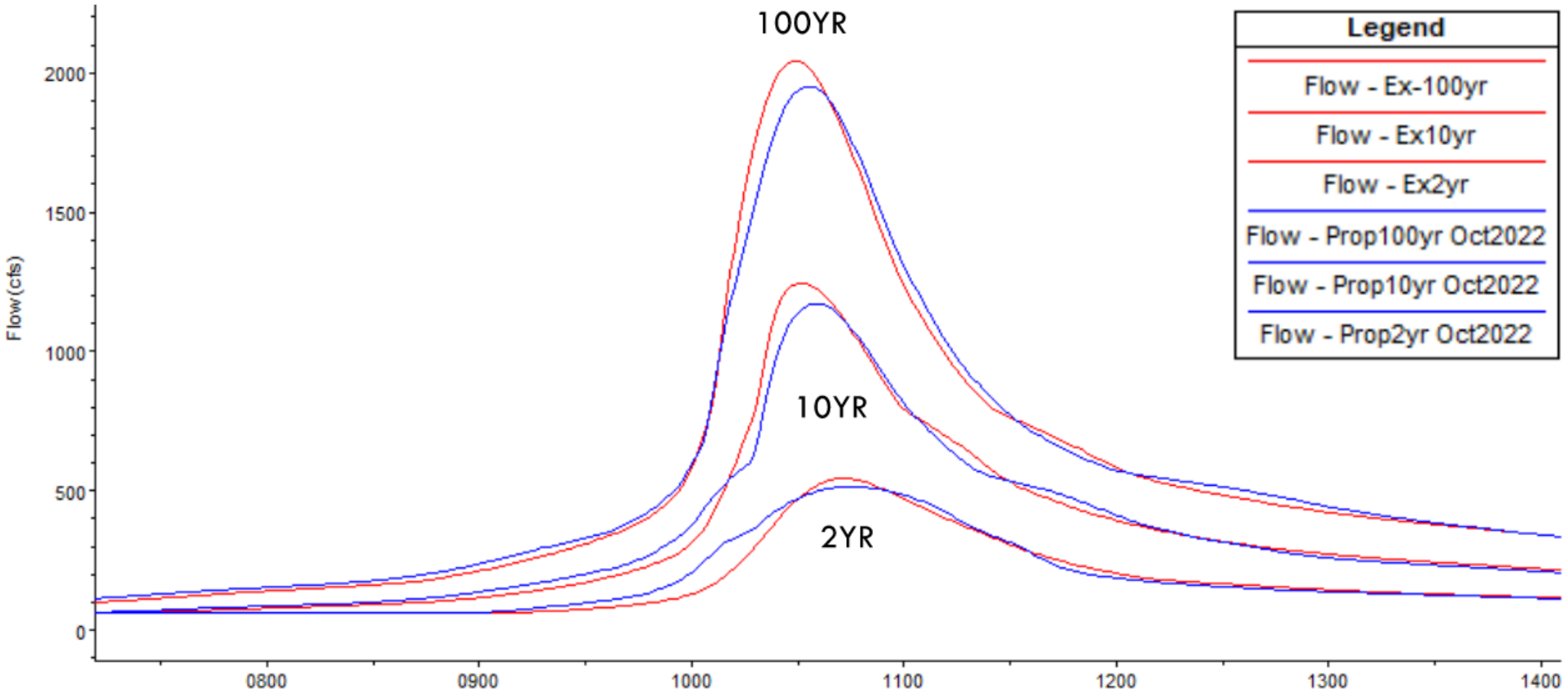
# Appendix C: Hydraulics Data and Results

## Manning's n for Channels (Chow, 1959).

| Type of Channel and Description | Minimum | Normal | Maximum |
|---|---|---|---|
| Natural streams - minor streams (top width at floodstage < 100 ft) | | | |
| **1. Main Channels** | | | |
| a. clean, straight, full stage, no rifts or deep pools | 0.025 | 0.030 | 0.033 |
| b. same as above, but more stones and weeds | 0.030 | 0.035 | 0.040 |
| c. clean, winding, some pools and shoals | 0.033 | 0.040 | 0.045 |
| d. same as above, but some weeds and stones | 0.035 | 0.045 | 0.050 |
| e. same as above, lower stages, more ineffective slopes and sections | 0.040 | 0.048 | 0.055 |
| f. same as "d" with more stones | 0.045 | 0.050 | 0.060 |
| g. sluggish reaches, weedy, deep pools | 0.050 | 0.070 | 0.080 |
| h. very weedy reaches, deep pools, or floodways with heavy stand of timber and underbrush | 0.075 | 0.100 | 0.150 |
| **2. Mountain streams, no vegetation in channel, banks usually steep, trees and brush along banks submerged at high stages** | | | |
| a. bottom: gravels, cobbles, and few boulders | 0.030 | 0.040 | 0.050 |
| b. bottom: cobbles with large boulders | 0.040 | 0.050 | 0.070 |
| **3. Floodplains** | | | |
| a. Pasture, no brush | | | |
| 1.short grass | 0.025 | 0.030 | 0.035 |
| 2. high grass | 0.030 | 0.035 | 0.050 |
| b. Cultivated areas | | | |
| 1. no crop | 0.020 | 0.030 | 0.040 |
| 2. mature row crops | 0.025 | 0.035 | 0.045 |
| 3. mature field crops | 0.030 | 0.040 | 0.050 |
| c. Brush | | | |
| 1. scattered brush, heavy weeds | 0.035 | 0.050 | 0.070 |
| 2. light brush and trees, in winter | 0.035 | 0.050 | 0.060 |
| 3. light brush and trees, in summer | 0.040 | 0.060 | 0.080 |
| 4. medium to dense brush, in winter | 0.045 | 0.070 | 0.110 |
| 5. medium to dense brush, in summer | 0.070 | 0.100 | 0.160 |
| d. Trees | | | |
| 1. dense willows, summer, straight | 0.110 | 0.150 | 0.200 |
| 2. cleared land with tree stumps, no sprouts | 0.030 | 0.040 | 0.050 |
| 3. same as above, but with heavy growth of sprouts | 0.050 | 0.060 | 0.080 |
| 4. heavy stand of timber, a few down trees, little undergrowth, flood stage below branches | 0.080 | 0.100 | 0.120 |
| 5. same as 4. with flood stage reaching branches | 0.100 | 0.120 | 0.160 |

# DOWNSTREAM HYDROGRAPHS

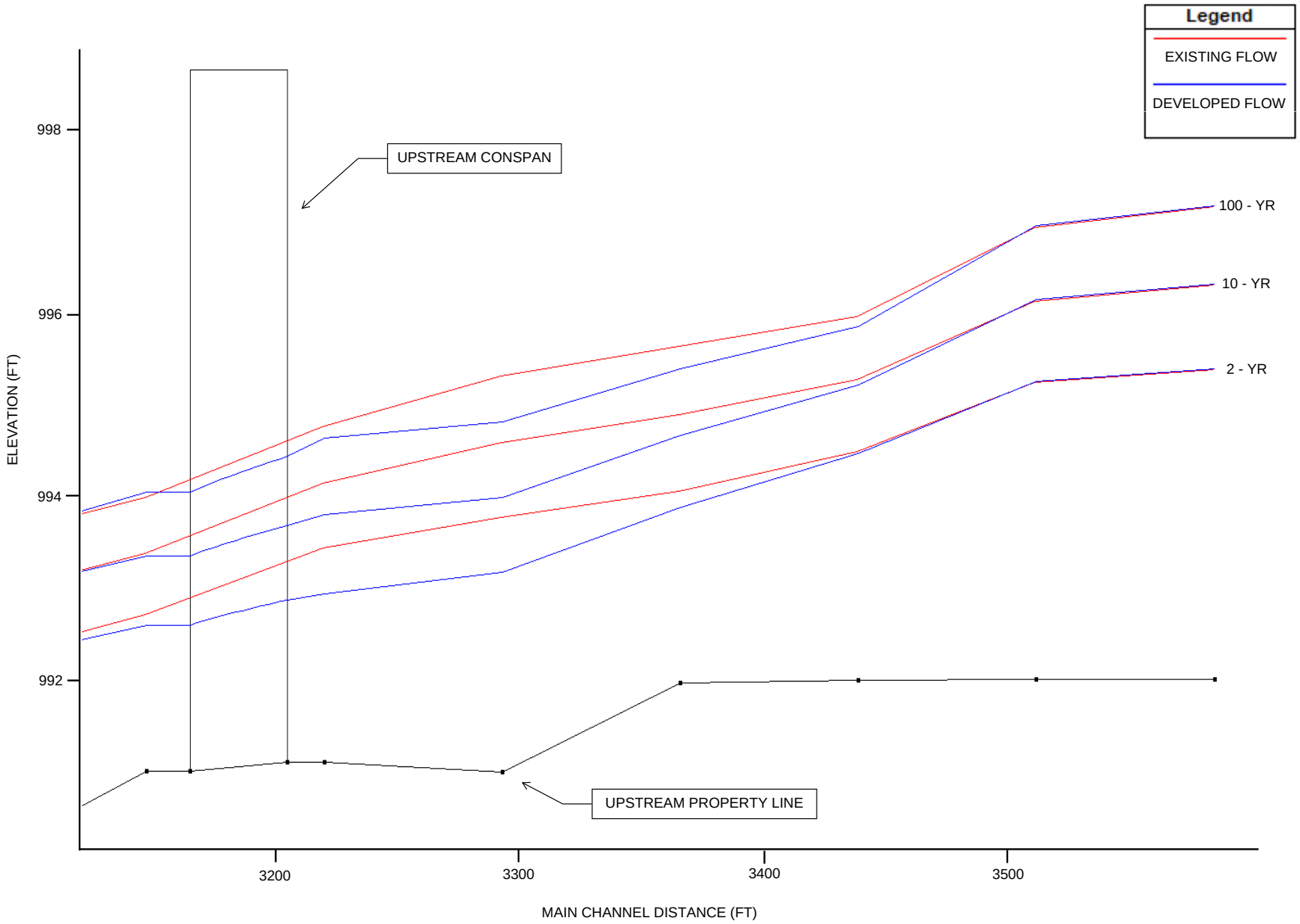
## WEST GREEN SPRINGS ROAD



# UPSTREAM PROFILE

## GREEN SPRINGS CREEK

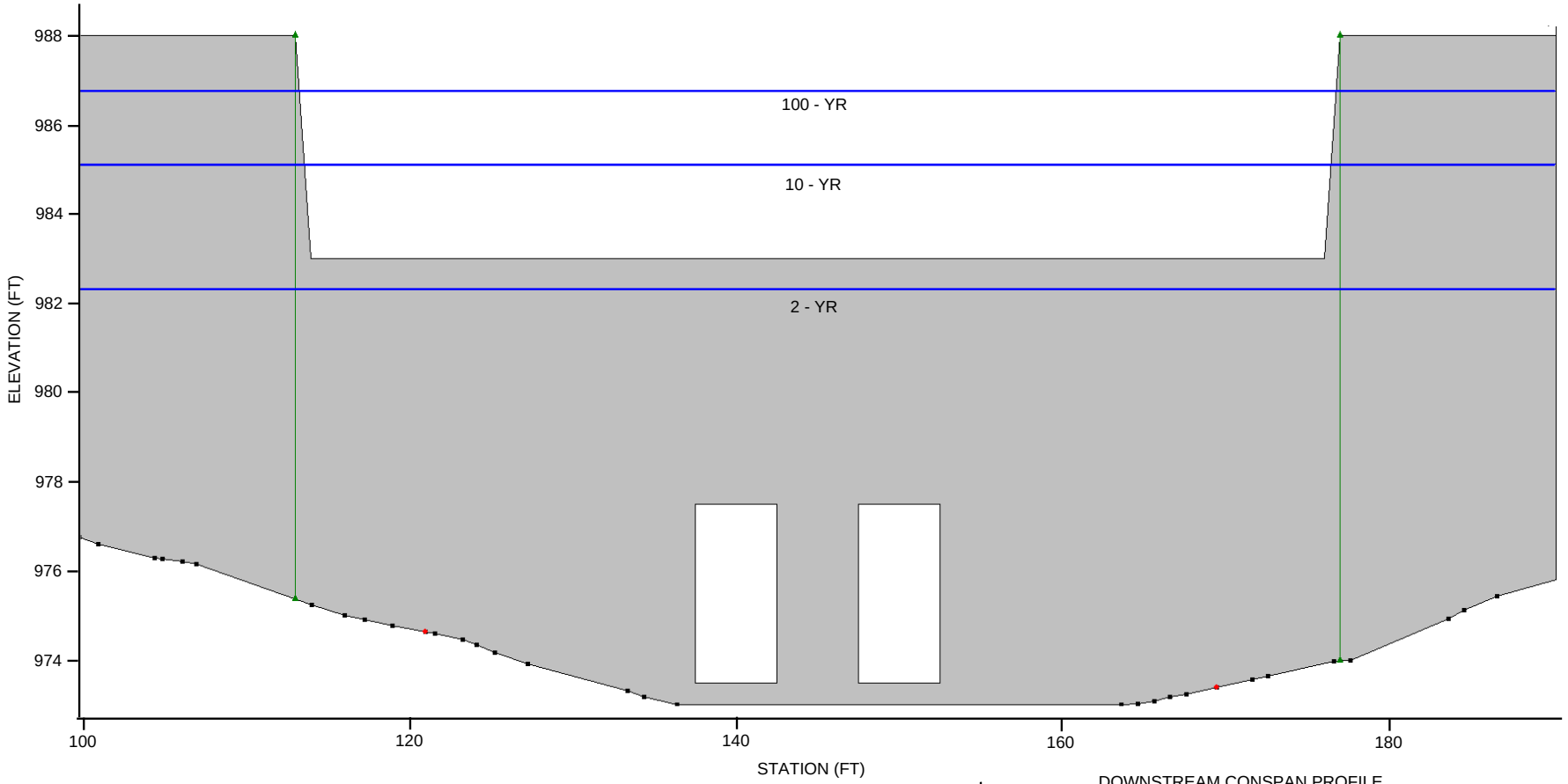
DOMENICHELLI AND ASSOCIATES, INC.
CIVIL ENGINEERING

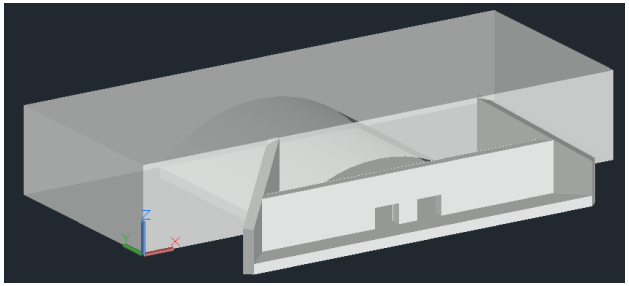


# CONTROL STRUCTURE

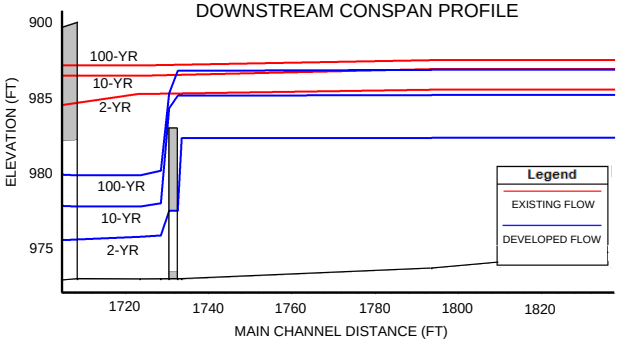
# DOWNSTREAM CONSPAN

DOMENICHELLI AND ASSOCIATES, INC.
CIVIL ENGINEERING



ROUGH SKETCH RENDERING OF CONTROL STRUCTURE



HEC-RAS River: GreenSprings CK Reach: US Profile: Max WS

| Reach | River Sta | Profile | Plan | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| US | 3711 | Max WS | Ex-100yr | 1877.57 | 992.00 | 997.17 | | 997.65 | 0.005524 | 7.10 | 409.58 | 173.65 | 0.56 |
| US | 3711 | Max WS | Ex10yr | 1148.50 | 992.00 | 996.31 | | 996.72 | 0.005391 | 6.19 | 275.67 | 139.99 | 0.54 |
| US | 3711 | Max WS | Ex2yr | 569.38 | 992.00 | 995.39 | | 995.66 | 0.004393 | 4.72 | 164.68 | 99.95 | 0.46 |
| US | 3711 | Max WS | Prop100yr Oct2022 | 1875.70 | 992.00 | 997.19 | | 997.67 | 0.005366 | 7.02 | 414.10 | 174.62 | 0.55 |
| US | 3711 | Max WS | Prop10yr Oct2022 | 1146.77 | 992.00 | 996.34 | | 996.73 | 0.005169 | 6.09 | 280.18 | 141.20 | 0.53 |
| US | 3711 | Max WS | Prop2yr Oct2022 | 568.40 | 992.00 | 995.39 | | 995.66 | 0.004363 | 4.70 | 164.91 | 100.04 | 0.46 |
| | | | | | | | | | | | | | |
| US | 3620.5 | Max WS | Ex-100yr | 1877.75 | 992.00 | 996.95 | | 997.28 | 0.003723 | 5.59 | 462.36 | 166.37 | 0.46 |
| US | 3620.5 | Max WS | Ex10yr | 1148.45 | 992.00 | 996.13 | | 996.36 | 0.003183 | 4.54 | 336.91 | 141.80 | 0.41 |
| US | 3620.5 | Max WS | Ex2yr | 569.37 | 992.00 | 995.25 | | 995.38 | 0.002458 | 3.35 | 220.92 | 121.90 | 0.34 |
| US | 3620.5 | Max WS | Prop100yr Oct2022 | 1875.57 | 992.00 | 996.97 | | 997.29 | 0.003641 | 5.54 | 466.08 | 167.25 | 0.45 |
| US | 3620.5 | Max WS | Prop10yr Oct2022 | 1146.70 | 992.00 | 996.16 | | 996.39 | 0.003071 | 4.48 | 341.28 | 142.85 | 0.40 |
| US | 3620.5 | Max WS | Prop2yr Oct2022 | 568.23 | 992.00 | 995.25 | | 995.38 | 0.002452 | 3.34 | 220.77 | 121.88 | 0.34 |
| | | | | | | | | | | | | | |
| US | 3531 | Max WS | Ex-100yr | 1880.93 | 991.99 | 995.97 | | 996.78 | 0.013027 | 9.29 | 299.31 | 140.27 | 0.83 |
| US | 3531 | Max WS | Ex10yr | 1150.37 | 991.99 | 995.28 | | 995.91 | 0.012344 | 7.94 | 210.69 | 121.28 | 0.78 |
| US | 3531 | Max WS | Ex2yr | 570.43 | 991.99 | 994.50 | | 994.97 | 0.011959 | 6.48 | 123.96 | 98.03 | 0.74 |
| US | 3531 | Max WS | Prop100yr Oct2022 | 1878.58 | 991.99 | 995.85 | | 996.75 | 0.014669 | 9.67 | 284.03 | 134.51 | 0.88 |
| US | 3531 | Max WS | Prop10yr Oct2022 | 1148.77 | 991.99 | 995.22 | | 995.90 | 0.013489 | 8.20 | 203.76 | 120.18 | 0.82 |
| US | 3531 | Max WS | Prop2yr Oct2022 | 569.33 | 991.99 | 994.47 | | 994.96 | 0.012531 | 6.59 | 121.45 | 97.03 | 0.75 |
| | | | | | | | | | | | | | |
| US | 3441.5 | Max WS | Ex-100yr | 1884.09 | 991.97 | 995.64 | | 995.99 | 0.005861 | 5.99 | 432.68 | 180.91 | 0.55 |
| US | 3441.5 | Max WS | Ex10yr | 1152.46 | 991.97 | 994.90 | | 995.17 | 0.006136 | 5.26 | 303.16 | 164.79 | 0.54 |
| US | 3441.5 | Max WS | Ex2yr | 571.45 | 991.97 | 994.06 | | 994.25 | 0.006331 | 4.25 | 178.42 | 130.17 | 0.52 |
| US | 3441.5 | Max WS | Prop100yr Oct2022 | 1881.71 | 991.97 | 995.40 | | 995.83 | 0.007927 | 6.65 | 389.85 | 176.33 | 0.64 |
| US | 3441.5 | Max WS | Prop10yr Oct2022 | 1150.79 | 991.97 | 994.67 | | 995.02 | 0.008617 | 5.91 | 267.13 | 155.84 | 0.64 |
| US | 3441.5 | Max WS | Prop2yr Oct2022 | 570.40 | 991.97 | 993.88 | | 994.13 | 0.009117 | 4.81 | 156.28 | 123.83 | 0.62 |
| | | | | | | | | | | | | | |
| US | 3352 | Max WS | Ex-100yr | 1887.26 | 990.99 | 995.32 | | 995.62 | 0.004220 | 5.64 | 470.24 | 175.99 | 0.48 |
| US | 3352 | Max WS | Ex10yr | 1154.52 | 990.99 | 994.59 | | 994.81 | 0.003780 | 4.71 | 346.29 | 162.00 | 0.44 |
| US | 3352 | Max WS | Ex2yr | 572.50 | 990.99 | 993.78 | | 993.91 | 0.003038 | 3.54 | 223.12 | 135.14 | 0.38 |
| US | 3352 | Max WS | Prop100yr Oct2022 | 1884.79 | 990.99 | 994.82 | | 995.28 | 0.007491 | 6.91 | 384.64 | 167.10 | 0.63 |
| US | 3352 | Max WS | Prop10yr Oct2022 | 1152.85 | 990.99 | 993.99 | | 994.40 | 0.008660 | 6.30 | 253.43 | 140.95 | 0.65 |
| US | 3352 | Max WS | Prop2yr Oct2022 | 571.47 | 990.99 | 993.17 | | 993.49 | 0.009716 | 5.37 | 146.28 | 120.05 | 0.65 |
| | | | | | | | | | | | | | |
| US | 3262.5 | Max WS | Ex-100yr | 1890.47 | 990.99 | 994.77 | | 995.22 | 0.007413 | 6.81 | 381.70 | 158.75 | 0.62 |
| US | 3262.5 | Max WS | Ex10yr | 1156.60 | 990.99 | 994.15 | | 994.46 | 0.006309 | 5.57 | 287.60 | 148.88 | 0.56 |
| US | 3262.5 | Max WS | Ex2yr | 573.53 | 990.99 | 993.44 | | 993.63 | 0.005300 | 4.29 | 186.24 | 134.39 | 0.49 |
| US | 3262.5 | Max WS | Prop100yr Oct2022 | 1887.98 | 991.10 | 994.65 | | 994.88 | 0.002515 | 3.85 | 491.00 | 176.94 | 0.36 |
| US | 3262.5 | Max WS | Prop10yr Oct2022 | 1154.89 | 991.10 | 993.80 | | 993.95 | 0.002338 | 3.09 | 373.69 | 167.96 | 0.33 |
| US | 3262.5 | Max WS | Prop2yr Oct2022 | 572.53 | 991.10 | 992.95 | | 993.02 | 0.002046 | 2.24 | 255.30 | 158.46 | 0.29 |
| | | | | | | | | | | | | | |
| US | 3173 | Max WS | Ex-100yr | 1890.35 | 990.94 | 993.99 | | 994.59 | 0.010454 | 6.95 | 310.18 | 148.02 | 0.71 |
| US | 3173 | Max WS | Ex10yr | 1156.55 | 990.94 | 993.39 | | 993.83 | 0.011046 | 6.13 | 222.32 | 142.38 | 0.70 |
| US | 3173 | Max WS | Ex2yr | 573.55 | 990.94 | 992.72 | | 993.07 | 0.014073 | 5.54 | 129.33 | 134.68 | 0.75 |
| US | 3173 | Max WS | Prop100yr Oct2022 | 1887.98 | 991.00 | 994.06 | | 994.36 | 0.004147 | 4.46 | 423.73 | 169.98 | 0.45 |
| US | 3173 | Max WS | Prop10yr Oct2022 | 1154.91 | 991.00 | 993.36 | | 993.55 | 0.003701 | 3.54 | 326.46 | 160.24 | 0.41 |
| US | 3173 | Max WS | Prop2yr Oct2022 | 572.52 | 991.00 | 992.61 | | 992.71 | 0.003241 | 2.57 | 222.96 | 149.89 | 0.36 |
| | | | | | | | | | | | | | |
| US | 3083.5 | Max WS | Ex-100yr | 1891.04 | 989.96 | 993.49 | | 993.96 | 0.007132 | 6.15 | 347.80 | 156.64 | 0.60 |
| US | 3083.5 | Max WS | Ex10yr | 1156.99 | 989.96 | 992.86 | | 993.19 | 0.006877 | 5.25 | 254.13 | 138.42 | 0.57 |
| US | 3083.5 | Max WS | Ex2yr | 573.72 | 989.96 | 992.18 | | 992.39 | 0.006915 | 4.32 | 162.14 | 131.80 | 0.54 |
| US | 3083.5 | Max WS | Prop100yr Oct2022 | 1888.30 | 989.96 | 993.54 | | 993.98 | 0.006710 | 6.02 | 354.70 | 157.88 | 0.58 |
| US | 3083.5 | Max WS | Prop10yr Oct2022 | 1155.11 | 989.96 | 992.86 | | 993.19 | 0.006926 | 5.26 | 253.28 | 138.36 | 0.57 |
| US | 3083.5 | Max WS | Prop2yr Oct2022 | 572.59 | 989.96 | 992.17 | | 992.38 | 0.007198 | 4.39 | 159.88 | 131.64 | 0.55 |
| | | | | | | | | | | | | | |
| US | 2994 | Max WS | Ex-100yr | 1891.72 | 988.99 | 992.90 | | 993.42 | 0.008092 | 7.05 | 340.19 | 165.45 | 0.65 |
| US | 2994 | Max WS | Ex10yr | 1157.33 | 988.99 | 992.41 | | 992.74 | 0.006527 | 5.75 | 260.73 | 155.67 | 0.57 |
| US | 2994 | Max WS | Ex2yr | 573.93 | 988.99 | 991.77 | | 991.99 | 0.005620 | 4.60 | 168.32 | 132.82 | 0.51 |
| US | 2994 | Max WS | Prop100yr Oct2022 | 1888.75 | 988.99 | 992.95 | | 993.45 | 0.007552 | 6.87 | 343.42 | 159.92 | 0.63 |
| US | 2994 | Max WS | Prop10yr Oct2022 | 1155.33 | 988.99 | 992.33 | | 992.70 | 0.007478 | 6.05 | 246.29 | 149.97 | 0.60 |
| US | 2994 | Max WS | Prop2yr Oct2022 | 572.67 | 988.99 | 991.74 | | 991.96 | 0.006071 | 4.74 | 163.69 | 132.29 | 0.53 |
| | | | | | | | | | | | | | |
| US | 2904.5 | Max WS | Ex-100yr | 1892.55 | 988.78 | 991.92 | | 992.60 | 0.014559 | 8.34 | 293.45 | 170.79 | 0.84 |
| US | 2904.5 | Max WS | Ex10yr | 1157.97 | 988.78 | 991.38 | 991.38 | 991.94 | 0.016760 | 7.85 | 203.42 | 162.26 | 0.88 |
| US | 2904.5 | Max WS | Ex2yr | 574.13 | 988.78 | 990.77 | | 991.19 | 0.016979 | 6.56 | 117.15 | 119.29 | 0.84 |
| US | 2904.5 | Max WS | Prop100yr Oct2022 | 1889.11 | 988.78 | 991.89 | | 992.62 | 0.015343 | 8.52 | 282.73 | 161.77 | 0.87 |
| US | 2904.5 | Max WS | Prop10yr Oct2022 | 1155.59 | 988.78 | 991.31 | 991.35 | 991.95 | 0.019852 | 8.39 | 189.62 | 155.52 | 0.95 |
| US | 2904.5 | Max WS | Prop2yr Oct2022 | 572.77 | 988.78 | 990.72 | 990.74 | 991.19 | 0.019514 | 6.92 | 111.34 | 117.22 | 0.90 |
| | | | | | | | | | | | | | |
| US | 2815 | Max WS | Ex-100yr | 1893.22 | 986.99 | 991.36 | | 991.79 | 0.007465 | 7.11 | 370.53 | 186.52 | 0.62 |
| US | 2815 | Max WS | Ex10yr | 1158.37 | 986.99 | 990.66 | | 991.03 | 0.007795 | 6.40 | 249.86 | 156.81 | 0.62 |
| US | 2815 | Max WS | Ex2yr | 574.34 | 986.99 | 989.95 | | 990.25 | 0.009166 | 5.92 | 144.66 | 137.48 | 0.64 |
| US | 2815 | Max WS | Prop100yr Oct2022 | 1889.37 | 986.99 | 991.38 | | 991.81 | 0.007191 | 6.99 | 366.88 | 176.99 | 0.61 |
| US | 2815 | Max WS | Prop10yr Oct2022 | 1155.82 | 986.99 | 990.74 | | 991.07 | 0.006702 | 6.02 | 259.71 | 153.26 | 0.57 |
| US | 2815 | Max WS | Prop2yr Oct2022 | 572.85 | 986.99 | 989.97 | | 990.25 | 0.008649 | 5.78 | 147.44 | 138.29 | 0.63 |
| | | | | | | | | | | | | | |
| US | 2725.5 | Max WS | Ex-100yr | 1893.90 | 986.94 | 990.72 | | 991.25 | 0.008374 | 7.14 | 336.94 | 160.55 | 0.66 |
| US | 2725.5 | Max WS | Ex10yr | 1158.77 | 986.94 | 989.95 | | 990.42 | 0.010000 | 6.66 | 217.49 | 130.54 | 0.69 |
| US | 2725.5 | Max WS | Ex2yr | 574.50 | 986.94 | 989.20 | | 989.57 | 0.011999 | 5.97 | 126.00 | 114.49 | 0.72 |
| US | 2725.5 | Max WS | Prop100yr Oct2022 | 1889.60 | 986.94 | 990.83 | | 991.32 | 0.007059 | 6.69 | 346.99 | 152.32 | 0.61 |
| US | 2725.5 | Max WS | Prop10yr Oct2022 | 1156.05 | 986.94 | 990.04 | | 990.50 | 0.009586 | 6.65 | 227.64 | 147.81 | 0.68 |
| US | 2725.5 | Max WS | Prop2yr Oct2022 | 572.94 | 986.94 | 989.22 | | 989.57 | 0.011577 | 5.89 | 127.34 | 114.72 | 0.71 |
| | | | | | | | | | | | | | |

HEC-RAS River: GreenSprings CK Reach: US Profile: Max WS (Continued)

| Reach | River Sta | Profile | Plan | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| US | 2636 | Max WS | Ex-100yr | 1894.47 | 985.95 | 989.71 | | 990.52 | 0.012307 | 8.52 | 269.06 | 119.41 | 0.79 |
| US | 2636 | Max WS | Ex10yr | 1159.18 | 985.95 | 989.03 | | 989.65 | 0.012955 | 7.59 | 190.10 | 110.26 | 0.79 |
| US | 2636 | Max WS | Ex2yr | 574.68 | 985.95 | 988.27 | | 988.74 | 0.014500 | 6.56 | 112.09 | 94.82 | 0.79 |
| US | 2636 | Max WS | Prop100yr Oct2022 | 1889.98 | 985.95 | 989.69 | | 990.60 | 0.012857 | 8.68 | 251.13 | 102.19 | 0.81 |
| US | 2636 | Max WS | Prop10yr Oct2022 | 1156.21 | 985.95 | 989.00 | | 989.66 | 0.012985 | 7.56 | 182.31 | 97.92 | 0.78 |
| US | 2636 | Max WS | Prop2yr Oct2022 | 573.10 | 985.95 | 988.25 | | 988.73 | 0.014967 | 6.63 | 110.10 | 93.07 | 0.80 |
| | | | | | | | | | | | | | |
| US | 2546.5 | Max WS | Ex-100yr | 1895.21 | 984.95 | 989.12 | | 989.78 | 0.008423 | 7.54 | 305.04 | 126.10 | 0.67 |
| US | 2546.5 | Max WS | Ex10yr | 1159.55 | 984.95 | 988.43 | | 988.91 | 0.008085 | 6.49 | 220.79 | 116.47 | 0.64 |
| US | 2546.5 | Max WS | Ex2yr | 574.91 | 984.95 | 987.72 | | 988.02 | 0.006880 | 5.07 | 142.19 | 102.92 | 0.56 |
| US | 2546.5 | Max WS | Prop100yr Oct2022 | 1890.10 | 984.95 | 989.17 | | 989.83 | 0.008078 | 7.43 | 297.50 | 110.85 | 0.66 |
| US | 2546.5 | Max WS | Prop10yr Oct2022 | 1156.41 | 984.95 | 988.48 | | 988.94 | 0.007412 | 6.27 | 222.25 | 107.51 | 0.61 |
| US | 2546.5 | Max WS | Prop2yr Oct2022 | 573.22 | 984.95 | 987.72 | | 988.02 | 0.006850 | 5.06 | 142.12 | 102.91 | 0.56 |
| | | | | | | | | | | | | | |
| US | 2457 | Max WS | Ex-100yr | 1895.89 | 984.88 | 988.25 | | 989.01 | 0.012477 | 8.20 | 275.39 | 127.57 | 0.79 |
| US | 2457 | Max WS | Ex10yr | 1159.79 | 984.88 | 987.58 | | 988.16 | 0.012763 | 7.13 | 194.50 | 114.03 | 0.77 |
| US | 2457 | Max WS | Ex2yr | 575.12 | 984.88 | 986.78 | | 987.24 | 0.016474 | 6.39 | 110.04 | 96.28 | 0.83 |
| US | 2457 | Max WS | Prop100yr Oct2022 | 1889.76 | 984.88 | 988.04 | | 988.98 | 0.016093 | 8.92 | 245.65 | 115.36 | 0.89 |
| US | 2457 | Max WS | Prop10yr Oct2022 | 1156.69 | 984.88 | 987.42 | | 988.12 | 0.016465 | 7.78 | 176.61 | 108.38 | 0.87 |
| US | 2457 | Max WS | Prop2yr Oct2022 | 573.35 | 984.88 | 986.78 | | 987.24 | 0.016366 | 6.36 | 110.06 | 96.29 | 0.83 |
| | | | | | | | | | | | | | |
| US | 2387 | Max WS | Ex-100yr | 1896.60 | 983.86 | 988.02 | | 988.39 | 0.004679 | 5.79 | 391.84 | 148.62 | 0.50 |
| US | 2387 | Max WS | Ex10yr | 1159.78 | 983.86 | 987.29 | | 987.55 | 0.004334 | 4.89 | 287.19 | 136.03 | 0.47 |
| US | 2387 | Max WS | Ex2yr | 572.55 | 983.86 | 986.18 | | 986.44 | 0.007411 | 4.91 | 147.63 | 116.94 | 0.57 |
| US | 2387 | Max WS | Prop100yr Oct2022 | 1885.66 | 983.86 | 987.70 | | 988.19 | 0.006565 | 6.50 | 339.67 | 134.12 | 0.59 |
| US | 2387 | Max WS | Prop10yr Oct2022 | 1156.92 | 983.86 | 986.91 | | 987.30 | 0.007438 | 5.92 | 236.40 | 125.86 | 0.60 |
| US | 2387 | Max WS | Prop2yr Oct2022 | 573.39 | 983.86 | 986.20 | | 986.45 | 0.007141 | 4.84 | 149.68 | 117.23 | 0.56 |
| | | | | | | | | | | | | | |
| US | 2317 | Max WS | Ex-100yr | 1942.91 | 982.95 | 987.73 | | 988.08 | 0.003791 | 5.59 | 419.42 | 143.54 | 0.46 |
| US | 2317 | Max WS | Ex10yr | 1186.82 | 982.95 | 987.07 | | 987.28 | 0.002930 | 4.42 | 327.01 | 133.42 | 0.39 |
| US | 2317 | Max WS | Ex2yr | 539.41 | 982.95 | 985.78 | | 985.98 | 0.004668 | 4.29 | 165.53 | 119.03 | 0.46 |
| US | 2317 | Max WS | Prop100yr Oct2022 | 1904.13 | 982.95 | 987.25 | | 987.72 | 0.006118 | 6.59 | 351.28 | 136.27 | 0.57 |
| US | 2317 | Max WS | Prop10yr Oct2022 | 1169.83 | 982.95 | 986.27 | | 986.73 | 0.008854 | 6.61 | 224.29 | 124.20 | 0.66 |
| US | 2317 | Max WS | Prop2yr Oct2022 | 587.74 | 982.95 | 985.56 | | 985.90 | 0.009133 | 5.67 | 139.59 | 116.86 | 0.64 |
| | | | | | | | | | | | | | |
| US | 2247 | Max WS | Ex-100yr | 1942.81 | 983.00 | 987.62 | | 987.86 | 0.002223 | 4.29 | 497.65 | 145.66 | 0.35 |
| US | 2247 | Max WS | Ex10yr | 1187.20 | 983.00 | 986.99 | | 987.12 | 0.001507 | 3.20 | 407.38 | 137.80 | 0.28 |
| US | 2247 | Max WS | Ex2yr | 530.93 | 983.00 | 985.66 | | 985.74 | 0.001662 | 2.55 | 233.57 | 123.89 | 0.28 |
| US | 2247 | Max WS | Prop100yr Oct2022 | 1895.32 | 983.00 | 987.05 | | 987.37 | 0.003616 | 5.00 | 415.63 | 138.50 | 0.44 |
| US | 2247 | Max WS | Prop10yr Oct2022 | 1041.55 | 983.00 | 986.00 | | 986.23 | 0.003804 | 4.19 | 276.38 | 127.53 | 0.43 |
| US | 2247 | Max WS | Prop2yr Oct2022 | 586.48 | 983.00 | 985.25 | | 985.41 | 0.004256 | 3.65 | 183.87 | 119.32 | 0.43 |
| | | | | | | | | | | | | | |
| US | 2177 | Max WS | Ex-100yr | 1941.89 | 982.90 | 987.56 | | 987.73 | 0.001496 | 3.53 | 595.80 | 164.05 | 0.29 |
| US | 2177 | Max WS | Ex10yr | 1186.93 | 982.90 | 986.94 | | 987.03 | 0.000982 | 2.60 | 495.60 | 158.26 | 0.23 |
| US | 2177 | Max WS | Ex2yr | 528.67 | 982.90 | 985.60 | | 985.65 | 0.000949 | 1.94 | 294.49 | 140.67 | 0.21 |
| US | 2177 | Max WS | Prop100yr Oct2022 | 1890.88 | 982.90 | 986.92 | | 987.16 | 0.002539 | 4.16 | 492.54 | 158.06 | 0.37 |
| US | 2177 | Max WS | Prop10yr Oct2022 | 1029.57 | 982.90 | 985.83 | | 985.99 | 0.002590 | 3.39 | 328.07 | 144.07 | 0.35 |
| US | 2177 | Max WS | Prop2yr Oct2022 | 503.79 | 982.90 | 985.08 | | 985.16 | 0.002009 | 2.44 | 223.49 | 132.94 | 0.30 |
| | | | | | | | | | | | | | |
| US | 2107 | Max WS | Ex-100yr | 1941.76 | 982.91 | 987.47 | | 987.62 | 0.001849 | 2.49 | 644.05 | 177.94 | 0.21 |
| US | 2107 | Max WS | Ex10yr | 1186.00 | 982.91 | 986.88 | | 986.96 | 0.001200 | 1.83 | 541.03 | 172.52 | 0.16 |
| US | 2107 | Max WS | Ex2yr | 525.40 | 982.91 | 985.53 | | 985.58 | 0.001242 | 1.40 | 319.23 | 154.45 | 0.15 |
| US | 2107 | Max WS | Prop100yr Oct2022 | 1886.48 | 982.91 | 986.79 | | 986.99 | 0.002275 | 3.85 | 524.94 | 171.39 | 0.35 |
| US | 2107 | Max WS | Prop10yr Oct2022 | 1135.76 | 982.91 | 985.21 | | 985.49 | 0.006226 | 4.47 | 271.25 | 149.07 | 0.53 |
| US | 2107 | Max WS | Prop2yr Oct2022 | 579.72 | 982.91 | 984.83 | | 984.95 | 0.003296 | 2.87 | 215.46 | 142.64 | 0.37 |
| | | | | | | | | | | | | | |
| US | 2037 | Max WS | Ex-100yr | 1943.13 | 981.26 | 987.45 | | 987.53 | 0.000583 | 1.69 | 912.80 | 207.59 | 0.12 |
| US | 2037 | Max WS | Ex10yr | 1186.36 | 981.26 | 986.87 | | 986.90 | 0.000331 | 1.19 | 793.54 | 198.07 | 0.09 |
| US | 2037 | Max WS | Ex2yr | 525.42 | 981.26 | 985.51 | | 985.52 | 0.000211 | 0.78 | 538.69 | 176.37 | 0.07 |
| US | 2037 | Max WS | Prop100yr Oct2022 | 1886.70 | 981.26 | 986.79 | | 986.88 | 0.000696 | 2.65 | 778.31 | 196.94 | 0.20 |
| US | 2037 | Max WS | Prop10yr Oct2022 | 1134.42 | 981.26 | 985.13 | | 985.22 | 0.001106 | 2.61 | 473.65 | 170.07 | 0.24 |
| US | 2037 | Max WS | Prop2yr Oct2022 | 512.49 | 981.26 | 982.70 | | 983.05 | 0.018585 | 5.18 | 110.95 | 122.79 | 0.82 |
| | | | | | | | | | | | | | |
| US | 1967 | Max WS | Ex-100yr | 1943.05 | 979.00 | 987.46 | | 987.50 | 0.000265 | 1.39 | 1318.26 | 231.93 | 0.09 |
| US | 1967 | Max WS | Ex10yr | 1186.66 | 979.00 | 986.87 | | 986.88 | 0.000138 | 0.95 | 1182.83 | 224.74 | 0.06 |
| US | 1967 | Max WS | Ex2yr | 524.51 | 979.00 | 985.51 | | 985.51 | 0.000062 | 0.56 | 894.71 | 198.79 | 0.04 |
| US | 1967 | Max WS | Prop100yr Oct2022 | 1888.73 | 979.00 | 986.80 | | 986.85 | 0.000211 | 1.82 | 1168.38 | 223.56 | 0.12 |
| US | 1967 | Max WS | Prop10yr Oct2022 | 1134.54 | 979.00 | 985.14 | | 985.17 | 0.000209 | 1.53 | 823.02 | 192.34 | 0.11 |
| US | 1967 | Max WS | Prop2yr Oct2022 | 496.73 | 979.00 | 982.30 | | 982.33 | 0.000578 | 1.61 | 335.61 | 151.18 | 0.17 |
| | | | | | | | | | | | | | |
| US | 1897 | Max WS | Ex-100yr | 1944.16 | 977.00 | 987.46 | | 987.48 | 0.000163 | 1.17 | 1714.40 | 268.46 | 0.07 |
| US | 1897 | Max WS | Ex10yr | 1186.94 | 977.00 | 986.87 | | 986.88 | 0.000081 | 0.79 | 1558.29 | 258.63 | 0.05 |
| US | 1897 | Max WS | Ex2yr | 525.28 | 977.00 | 985.51 | | 985.51 | 0.000032 | 0.44 | 1227.38 | 227.13 | 0.03 |
| US | 1897 | Max WS | Prop100yr Oct2022 | 1888.75 | 977.00 | 986.81 | | 986.84 | 0.000097 | 1.34 | 1543.50 | 257.54 | 0.08 |
| US | 1897 | Max WS | Prop10yr Oct2022 | 1135.67 | 977.00 | 985.14 | | 985.16 | 0.000081 | 1.05 | 1146.51 | 219.47 | 0.07 |
| US | 1897 | Max WS | Prop2yr Oct2022 | 497.88 | 977.00 | 982.30 | | 982.31 | 0.000113 | 0.85 | 592.17 | 172.58 | 0.08 |
| | | | | | | | | | | | | | |
| US | 1827 | Max WS | Ex-100yr | 1944.29 | 976.67 | 987.46 | | 987.47 | 0.000096 | 0.94 | 2105.90 | 302.51 | 0.05 |
| US | 1827 | Max WS | Ex10yr | 1186.95 | 976.67 | 986.87 | | 986.87 | 0.000046 | 0.63 | 1930.15 | 291.66 | 0.04 |
| US | 1827 | Max WS | Ex2yr | 525.15 | 976.67 | 985.50 | | 985.51 | 0.000017 | 0.35 | 1551.46 | 265.27 | 0.02 |
| US | 1827 | Max WS | Prop100yr Oct2022 | 1888.72 | 976.67 | 986.81 | | 986.83 | 0.000057 | 1.09 | 1914.72 | 290.43 | 0.06 |
| US | 1827 | Max WS | Prop10yr Oct2022 | 1135.57 | 976.67 | 985.14 | | 985.16 | 0.000045 | 0.84 | 1457.24 | 258.24 | 0.05 |
| US | 1827 | Max WS | Prop2yr Oct2022 | 496.85 | 976.67 | 982.30 | | 982.30 | 0.000050 | 0.64 | 799.95 | 205.35 | 0.05 |
| | | | | | | | | | | | | | |

HEC-RAS River: GreenSprings CK Reach: US Profile: Max WS (Continued)

| Reach | River Sta | Profile | Plan | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| US | 1757 | Max WS | Ex-100yr | 1944.87 | 975.43 | 987.45 | | 987.46 | 0.000075 | 0.88 | 2238.70 | 301.49 | 0.05 |
| US | 1757 | Max WS | Ex10yr | 1187.29 | 975.43 | 986.86 | | 986.87 | 0.000035 | 0.58 | 2065.36 | 288.42 | 0.03 |
| US | 1757 | Max WS | Ex2yr | 524.74 | 975.43 | 985.50 | | 985.51 | 0.000013 | 0.32 | 1687.56 | 267.30 | 0.02 |
| US | 1757 | Max WS | Prop100yr Oct2022 | 1888.06 | 975.43 | 986.81 | | 986.83 | 0.000045 | 1.03 | 2050.27 | 287.59 | 0.06 |
| US | 1757 | Max WS | Prop10yr Oct2022 | 1134.99 | 975.43 | 985.14 | | 985.15 | 0.000034 | 0.78 | 1592.25 | 261.93 | 0.05 |
| US | 1757 | Max WS | Prop2yr Oct2022 | 496.90 | 975.43 | 982.29 | | 982.30 | 0.000032 | 0.57 | 912.96 | 211.67 | 0.04 |
| | | | | | | | | | | | | | |
| US | 1687 | Max WS | Ex-100yr | 1945.44 | 973.72 | 987.45 | | 987.46 | 0.000051 | 0.77 | 2505.55 | 294.19 | 0.04 |
| US | 1687 | Max WS | Ex10yr | 1187.62 | 973.72 | 986.86 | | 986.87 | 0.000023 | 0.50 | 2336.64 | 281.25 | 0.03 |
| US | 1687 | Max WS | Ex2yr | 524.89 | 973.72 | 985.50 | | 985.50 | 0.000008 | 0.27 | 1963.17 | 268.46 | 0.02 |
| US | 1687 | Max WS | Prop100yr Oct2022 | 1888.65 | 973.98 | 986.81 | | 986.82 | 0.000026 | 0.86 | 2423.53 | 280.98 | 0.04 |
| US | 1687 | Max WS | Prop10yr Oct2022 | 1135.35 | 973.98 | 985.14 | | 985.15 | 0.000017 | 0.63 | 1968.13 | 265.00 | 0.04 |
| US | 1687 | Max WS | Prop2yr Oct2022 | 497.23 | 973.98 | 982.29 | | 982.30 | 0.000012 | 0.42 | 1259.27 | 229.18 | 0.03 |
| | | | | | | | | | | | | | |
| US | 1650 | | | Lat Struct | | | | | | | | | |
| | | | | | | | | | | | | | |
| US | 1627 | Max WS | Prop100yr Oct2022 | 1888.64 | 973.00 | 986.76 | | 986.83 | 0.000125 | 2.10 | 883.30 | 318.63 | 0.10 |
| US | 1627 | Max WS | Prop10yr Oct2022 | 1135.26 | 973.00 | 985.12 | | 985.15 | 0.000070 | 1.44 | 775.00 | 307.57 | 0.07 |
| US | 1627 | Max WS | Prop2yr Oct2022 | 496.98 | 973.00 | 982.29 | | 982.30 | 0.000034 | 0.84 | 587.96 | 283.04 | 0.05 |
| | | | | | | | | | | | | | |
| US | 1622 | Max WS | Prop100yr Oct2022 | 1888.64 | 973.00 | 980.17 | | 980.44 | 0.001198 | 4.19 | 448.13 | 225.78 | 0.28 |
| US | 1622 | Max WS | Prop10yr Oct2022 | 1135.26 | 973.00 | 978.03 | | 978.24 | 0.001528 | 3.72 | 306.98 | 180.11 | 0.30 |
| US | 1622 | Max WS | Prop2yr Oct2022 | 496.98 | 973.00 | 975.91 | | 976.05 | 0.002198 | 3.05 | 167.19 | 128.29 | 0.32 |
| | | | | | | | | | | | | | |
| US | 1617 | Max WS | Ex-100yr | 1090.14 | 980.50 | 987.11 | | 987.54 | 0.006820 | 5.30 | 209.66 | 82.14 | 0.56 |
| US | 1617 | Max WS | Ex10yr | 805.70 | 980.50 | 986.43 | | 986.86 | 0.009888 | 5.28 | 154.37 | 78.84 | 0.64 |
| US | 1617 | Max WS | Ex2yr | 513.86 | 980.50 | 985.22 | | 985.82 | 0.005405 | 6.21 | 82.72 | 61.10 | 0.52 |
| US | 1617 | Max WS | Prop100yr Oct2022 | 1888.66 | 973.00 | 979.73 | | 980.46 | 0.003511 | 6.85 | 275.66 | 201.07 | 0.47 |
| US | 1617 | Max WS | Prop10yr Oct2022 | 1135.27 | 973.00 | 977.69 | | 978.25 | 0.004376 | 5.97 | 190.13 | 144.56 | 0.49 |
| US | 1617 | Max WS | Prop2yr Oct2022 | 496.99 | 973.00 | 975.70 | | 976.04 | 0.005781 | 4.66 | 106.54 | 120.72 | 0.52 |
| | | | | | | | | | | | | | |
| US | 1600 | | | Culvert | | | | | | | | | |
| | | | | | | | | | | | | | |
| US | 1575 | Max WS | Ex-100yr | 956.28 | 979.90 | 983.81 | 984.35 | 986.61 | 0.028627 | 13.43 | 71.18 | 37.77 | 1.22 |
| US | 1575 | Max WS | Ex10yr | 743.25 | 979.90 | 983.44 | 983.67 | 985.52 | 0.024284 | 11.56 | 64.29 | 37.14 | 1.11 |
| US | 1575 | Max WS | Ex2yr | 511.93 | 979.90 | 982.67 | 982.88 | 984.33 | 0.027522 | 10.34 | 49.51 | 35.66 | 1.13 |
| US | 1575 | Max WS | Prop100yr Oct2022 | 1888.66 | 972.28 | 974.34 | 976.25 | 981.89 | 0.176874 | 22.05 | 85.64 | 107.83 | 2.75 |
| US | 1575 | Max WS | Prop10yr Oct2022 | 1135.27 | 972.28 | 973.81 | 975.12 | 978.85 | 0.177853 | 18.02 | 63.00 | 101.10 | 2.62 |
| US | 1575 | Max WS | Prop2yr Oct2022 | 496.97 | 972.28 | 973.23 | 973.94 | 975.82 | 0.175108 | 12.89 | 38.56 | 93.85 | 2.39 |
| | | | | | | | | | | | | | |
| US | 1550 | | | Lat Struct | | | | | | | | | |
| | | | | | | | | | | | | | |
| US | 1514 | Max WS | Ex-100yr | 864.37 | 977.00 | 985.17 | | 985.39 | 0.001111 | 3.81 | 251.67 | 63.48 | 0.26 |
| US | 1514 | Max WS | Ex10yr | 623.31 | 977.00 | 984.40 | | 984.55 | 0.000884 | 3.14 | 212.02 | 46.00 | 0.22 |
| US | 1514 | Max WS | Ex2yr | 451.54 | 977.00 | 983.15 | | 983.28 | 0.001039 | 2.92 | 160.11 | 37.94 | 0.23 |
| US | 1514 | Max WS | Prop100yr Oct2022 | 1888.68 | 968.08 | 973.42 | | 973.63 | 0.001652 | 4.01 | 523.78 | 135.94 | 0.31 |
| US | 1514 | Max WS | Prop10yr Oct2022 | 1135.31 | 968.08 | 972.00 | | 972.18 | 0.002047 | 3.61 | 343.20 | 119.49 | 0.33 |
| US | 1514 | Max WS | Prop2yr Oct2022 | 496.73 | 968.08 | 970.66 | | 970.76 | 0.001963 | 2.63 | 198.91 | 96.19 | 0.30 |
| | | | | | | | | | | | | | |
| US | 1486 | Max WS | Ex-100yr | 730.27 | 975.96 | 977.87 | 979.50 | 984.34 | 0.218602 | 20.41 | 35.78 | 22.69 | 2.86 |
| US | 1486 | Max WS | Ex10yr | 532.49 | 975.96 | 977.56 | 978.89 | 982.86 | 0.220795 | 18.46 | 28.84 | 21.51 | 2.81 |
| US | 1486 | Max WS | Ex2yr | 378.36 | 975.96 | 977.32 | 978.37 | 981.23 | 0.196941 | 15.86 | 23.86 | 20.62 | 2.60 |
| US | 1486 | Max WS | Prop100yr Oct2022 | 1950.91 | 967.82 | 973.03 | | 973.43 | 0.003269 | 5.54 | 396.92 | 108.45 | 0.43 |
| US | 1486 | Max WS | Prop10yr Oct2022 | 1171.35 | 967.82 | 971.53 | | 971.93 | 0.005159 | 5.49 | 241.46 | 98.41 | 0.51 |
| US | 1486 | Max WS | Prop2yr Oct2022 | 513.54 | 967.82 | 970.15 | | 970.49 | 0.007704 | 4.84 | 117.23 | 78.41 | 0.58 |
| | | | | | | | | | | | | | |
| US | 1472 | Max WS | Ex-100yr | 739.40 | 975.14 | 979.16 | | 979.61 | 0.011074 | 5.31 | 139.26 | 66.55 | 0.49 |
| US | 1472 | Max WS | Ex10yr | 475.29 | 975.14 | 978.53 | | 978.88 | 0.011452 | 4.76 | 101.02 | 55.19 | 0.48 |
| US | 1472 | Max WS | Ex2yr | 322.38 | 975.14 | 977.91 | | 978.24 | 0.014967 | 4.67 | 69.83 | 43.11 | 0.53 |
| US | 1472 | Max WS | Prop100yr Oct2022 | 1950.68 | 966.88 | 972.94 | | 973.36 | 0.003029 | 5.97 | 388.65 | 99.38 | 0.43 |
| US | 1472 | Max WS | Prop10yr Oct2022 | 1171.27 | 966.88 | 971.43 | | 971.83 | 0.004116 | 5.74 | 246.41 | 89.13 | 0.48 |
| US | 1472 | Max WS | Prop2yr Oct2022 | 513.56 | 966.88 | 970.07 | | 970.36 | 0.004503 | 4.71 | 131.62 | 78.94 | 0.47 |
| | | | | | | | | | | | | | |
| US | 1410.57 | Max WS | Ex-100yr | 729.67 | 964.79 | 978.72 | | 978.73 | 0.000026 | 0.52 | 1481.83 | 209.19 | 0.03 |
| US | 1410.57 | Max WS | Ex10yr | 475.17 | 964.79 | 978.04 | | 978.04 | 0.000015 | 0.37 | 1343.81 | 195.57 | 0.02 |
| US | 1410.57 | Max WS | Ex2yr | 322.08 | 964.79 | 977.23 | | 977.23 | 0.000009 | 0.28 | 1192.08 | 178.94 | 0.02 |
| US | 1410.57 | Max WS | Prop100yr Oct2022 | 1949.68 | 965.93 | 970.35 | 970.60 | 972.01 | 0.028833 | 10.35 | 188.39 | 74.13 | 1.14 |
| US | 1410.57 | Max WS | Prop10yr Oct2022 | 1171.29 | 965.93 | 969.86 | | 970.77 | 0.019530 | 7.65 | 153.02 | 70.77 | 0.92 |
| US | 1410.57 | Max WS | Prop2yr Oct2022 | 475.83 | 965.93 | 968.89 | | 969.34 | 0.016362 | 5.39 | 88.20 | 60.47 | 0.79 |
| | | | | | | | | | | | | | |
| US | 1400 | | | Lat Struct | | | | | | | | | |
| | | | | | | | | | | | | | |
| US | 1336.86 | Max WS | Ex-100yr | 2042.98 | 962.90 | 978.69 | | 978.71 | 0.000081 | 1.00 | 2143.25 | 249.95 | 0.05 |
| US | 1336.86 | Max WS | Ex10yr | 1244.32 | 962.90 | 978.03 | | 978.03 | 0.000037 | 0.65 | 1981.82 | 236.27 | 0.03 |
| US | 1336.86 | Max WS | Ex2yr | 544.08 | 962.90 | 977.23 | | 977.23 | 0.000010 | 0.31 | 1796.73 | 227.42 | 0.02 |
| US | 1336.86 | Max WS | Prop100yr Oct2022 | 1951.85 | 964.27 | 969.05 | 968.99 | 970.20 | 0.021305 | 8.59 | 227.33 | 94.52 | 0.98 |
| US | 1336.86 | Max WS | Prop10yr Oct2022 | 1171.86 | 964.27 | 968.23 | 968.27 | 969.16 | 0.027305 | 7.72 | 151.87 | 89.48 | 1.04 |
| US | 1336.86 | Max WS | Prop2yr Oct2022 | 513.84 | 964.27 | 967.12 | 967.29 | 968.00 | 0.033229 | 7.51 | 68.47 | 48.49 | 1.11 |
| | | | | | | | | | | | | | |
| US | 1263.14 | Max WS | Ex-100yr | 2042.16 | 963.00 | 978.69 | | 978.70 | 0.000063 | 0.88 | 2432.56 | 288.43 | 0.04 |
| US | 1263.14 | Max WS | Ex10yr | 1244.01 | 963.00 | 978.03 | | 978.03 | 0.000029 | 0.57 | 2246.47 | 269.27 | 0.03 |
| US | 1263.14 | Max WS | Ex2yr | 544.01 | 963.00 | 977.23 | | 977.23 | 0.000007 | 0.28 | 2038.14 | 253.31 | 0.02 |
| US | 1263.14 | Max WS | Prop100yr Oct2022 | 1952.14 | 962.91 | 968.77 | | 969.22 | 0.005002 | 5.38 | 362.69 | 102.23 | 0.50 |
| US | 1263.14 | Max WS | Prop10yr Oct2022 | 1172.00 | 962.91 | 967.67 | | 968.00 | 0.005305 | 4.60 | 254.83 | 95.27 | 0.50 |

HEC-RAS River: GreenSprings CK Reach: US Profile: Max WS (Continued)

| Reach | River Sta | Profile | Plan | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| US | 1263.14 | Max WS | Prop2yr Oct2022 | 513.94 | 962.91 | 966.60 | | 966.76 | 0.004739 | 3.30 | 155.82 | 88.39 | 0.44 |
| | | | | | | | | | | | | | |
| US | 1190 | Max WS | Prop100yr Oct2022 | 1952.05 | 962.27 | 968.07 | 967.08 | 968.74 | 0.008132 | 6.57 | 297.00 | 89.12 | 0.63 |
| US | 1190 | Max WS | Prop10yr Oct2022 | 1171.96 | 962.27 | 966.95 | 966.28 | 967.48 | 0.009544 | 5.82 | 201.49 | 82.13 | 0.65 |
| US | 1190 | Max WS | Prop2yr Oct2022 | 513.92 | 962.27 | 965.58 | 965.30 | 966.03 | 0.016847 | 5.35 | 96.10 | 68.20 | 0.79 |
| | | | | | | | | | | | | | |
| US | 1189.43 | Max WS | Ex-100yr | 2041.64 | 965.12 | 978.68 | 968.88 | 978.70 | 0.000094 | 0.96 | 2225.32 | 306.63 | 0.05 |
| US | 1189.43 | Max WS | Ex10yr | 1243.96 | 965.12 | 978.02 | 968.14 | 978.03 | 0.000046 | 0.64 | 2027.75 | 292.52 | 0.04 |
| US | 1189.43 | Max WS | Ex2yr | 543.97 | 965.12 | 977.23 | 967.23 | 977.23 | 0.000012 | 0.31 | 1804.93 | 268.16 | 0.02 |
| | | | | | | | | | | | | | |
| US | 1180 | | | Inl Struct | | | | | | | | | |
| | | | | | | | | | | | | | |
| US | 1170 | Max WS | Prop100yr Oct2022 | 1952.05 | 961.00 | 966.58 | | 967.13 | 0.008432 | 5.71 | 337.94 | 106.81 | 0.54 |
| US | 1170 | Max WS | Prop10yr Oct2022 | 1171.96 | 961.00 | 965.53 | | 965.93 | 0.010631 | 5.07 | 231.40 | 96.92 | 0.57 |
| US | 1170 | Max WS | Prop2yr Oct2022 | 513.93 | 961.00 | 964.15 | | 964.48 | 0.016406 | 4.61 | 111.42 | 71.77 | 0.65 |
| | | | | | | | | | | | | | |
| US | 1115.71 | Max WS | Ex-100yr | 2041.64 | 957.96 | 961.35 | 962.84 | 965.74 | 0.097926 | 18.19 | 136.48 | 67.38 | 1.80 |
| US | 1115.71 | Max WS | Ex10yr | 1243.97 | 957.96 | 960.66 | 961.68 | 964.08 | 0.105246 | 16.01 | 92.98 | 57.92 | 1.79 |
| US | 1115.71 | Max WS | Ex2yr | 543.97 | 957.96 | 959.79 | 960.50 | 962.10 | 0.119485 | 12.80 | 48.46 | 43.99 | 1.78 |
| US | 1115.71 | Max WS | Prop100yr Oct2022 | 1952.06 | 957.96 | 961.28 | 962.73 | 965.58 | 0.099381 | 18.04 | 131.57 | 66.58 | 1.81 |
| US | 1115.71 | Max WS | Prop10yr Oct2022 | 1171.92 | 957.96 | 960.57 | 961.58 | 963.97 | 0.109314 | 15.91 | 87.73 | 56.46 | 1.82 |
| US | 1115.71 | Max WS | Prop2yr Oct2022 | 513.92 | 957.96 | 959.77 | 960.44 | 961.92 | 0.113736 | 12.36 | 47.34 | 43.56 | 1.73 |
| | | | | | | | | | | | | | |
| US | 1042.00 | Max WS | Ex-100yr | 2041.19 | 953.90 | 959.74 | | 960.97 | 0.012592 | 9.67 | 265.00 | 72.83 | 0.71 |
| US | 1042.00 | Max WS | Ex10yr | 1243.89 | 953.90 | 958.40 | | 959.38 | 0.013793 | 8.47 | 175.95 | 59.91 | 0.71 |
| US | 1042.00 | Max WS | Ex2yr | 543.93 | 953.90 | 957.03 | | 957.55 | 0.011645 | 6.06 | 102.59 | 48.00 | 0.62 |
| US | 1042.00 | Max WS | Prop100yr Oct2022 | 1952.01 | 953.90 | 959.66 | | 960.83 | 0.012260 | 9.45 | 258.76 | 72.02 | 0.70 |
| US | 1042.00 | Max WS | Prop10yr Oct2022 | 1171.89 | 953.90 | 958.25 | | 959.21 | 0.014071 | 8.35 | 167.00 | 58.45 | 0.72 |
| US | 1042.00 | Max WS | Prop2yr Oct2022 | 513.91 | 953.90 | 957.03 | | 957.49 | 0.010506 | 5.75 | 102.21 | 47.93 | 0.58 |
| | | | | | | | | | | | | | |
| US | 968.29 | Max WS | Ex-100yr | 2040.23 | 953.00 | 959.43 | | 960.11 | 0.006682 | 7.53 | 343.68 | 98.52 | 0.53 |
| US | 968.29 | Max WS | Ex10yr | 1243.83 | 953.00 | 957.95 | | 958.53 | 0.006808 | 6.36 | 219.01 | 65.23 | 0.51 |
| US | 968.29 | Max WS | Ex2yr | 543.89 | 953.00 | 956.70 | | 956.94 | 0.004165 | 4.08 | 144.46 | 55.12 | 0.38 |
| US | 968.29 | Max WS | Prop100yr Oct2022 | 1951.92 | 953.00 | 959.34 | | 960.00 | 0.006556 | 7.39 | 335.30 | 97.76 | 0.52 |
| US | 968.29 | Max WS | Prop10yr Oct2022 | 1171.84 | 953.00 | 957.81 | | 958.37 | 0.006766 | 6.22 | 209.93 | 63.82 | 0.51 |
| US | 968.29 | Max WS | Prop2yr Oct2022 | 513.90 | 953.00 | 956.73 | | 956.94 | 0.003599 | 3.81 | 146.09 | 55.30 | 0.35 |
| | | | | | | | | | | | | | |
| US | 894.57 | Max WS | Ex-100yr | 2040.79 | 952.90 | 957.40 | 957.34 | 959.19 | 0.023865 | 11.26 | 212.27 | 71.20 | 0.94 |
| US | 894.57 | Max WS | Ex10yr | 993.97 | 952.90 | 956.90 | | 957.45 | 0.008533 | 6.22 | 180.50 | 57.51 | 0.55 |
| US | 894.57 | Max WS | Ex2yr | 381.08 | 952.90 | 956.42 | | 956.53 | 0.001984 | 2.75 | 154.05 | 54.36 | 0.26 |
| US | 894.57 | Max WS | Prop100yr Oct2022 | 1951.26 | 952.90 | 957.25 | 957.07 | 959.03 | 0.024649 | 11.18 | 201.98 | 65.94 | 0.95 |
| US | 894.57 | Max WS | Prop10yr Oct2022 | 1045.18 | 952.90 | 956.92 | | 957.53 | 0.009229 | 6.49 | 181.92 | 57.73 | 0.57 |
| US | 894.57 | Max WS | Prop2yr Oct2022 | 513.87 | 952.90 | 956.48 | | 956.68 | 0.003385 | 3.64 | 157.47 | 54.78 | 0.34 |
| | | | | | | | | | | | | | |
| US | 820.86 | Max WS | Ex-100yr | 1038.74 | 952.97 | 956.81 | | 957.02 | 0.003301 | 3.80 | 305.19 | 103.21 | 0.34 |
| US | 820.86 | Max WS | Ex10yr | 946.97 | 952.97 | 956.77 | | 956.95 | 0.002852 | 3.50 | 300.78 | 101.54 | 0.32 |
| US | 820.86 | Max WS | Ex2yr | 376.74 | 952.97 | 956.39 | | 956.42 | 0.000644 | 1.55 | 264.13 | 90.49 | 0.15 |
| US | 820.86 | Max WS | Prop100yr Oct2022 | 1060.09 | 952.97 | 956.81 | | 957.03 | 0.003434 | 3.87 | 305.33 | 103.27 | 0.35 |
| US | 820.86 | Max WS | Prop10yr Oct2022 | 1021.78 | 952.97 | 956.78 | | 956.99 | 0.003275 | 3.76 | 302.30 | 101.95 | 0.34 |
| US | 820.86 | Max WS | Prop2yr Oct2022 | 513.86 | 952.97 | 956.43 | | 956.49 | 0.001147 | 2.09 | 268.11 | 91.02 | 0.20 |
| | | | | | | | | | | | | | |
| US | 747.14 | Max WS | Ex-100yr | 2041.68 | 948.87 | 952.79 | 953.46 | 954.94 | 0.052245 | 14.11 | 196.24 | 111.83 | 1.33 |
| US | 747.14 | Max WS | Ex10yr | 1244.57 | 948.87 | 952.01 | 952.76 | 954.62 | 0.087371 | 15.43 | 115.19 | 93.62 | 1.65 |
| US | 747.14 | Max WS | Ex2yr | 543.87 | 948.87 | 951.16 | 951.96 | 954.29 | 0.136390 | 15.01 | 46.97 | 61.46 | 1.93 |
| US | 747.14 | Max WS | Prop100yr Oct2022 | 1952.08 | 948.87 | 952.71 | 953.38 | 954.89 | 0.054979 | 14.24 | 186.73 | 109.86 | 1.36 |
| US | 747.14 | Max WS | Prop10yr Oct2022 | 1172.71 | 948.87 | 951.93 | 952.71 | 954.61 | 0.092593 | 15.57 | 107.78 | 91.61 | 1.69 |
| US | 747.14 | Max WS | Prop2yr Oct2022 | 513.83 | 948.87 | 951.15 | 951.90 | 954.03 | 0.126558 | 14.38 | 46.07 | 61.00 | 1.86 |
| | | | | | | | | | | | | | |
| US | 673.43 | Max WS | Ex-100yr | 2041.53 | 944.91 | 952.06 | | 952.34 | 0.001830 | 5.18 | 521.84 | 127.01 | 0.34 |
| US | 673.43 | Max WS | Ex10yr | 1244.32 | 944.91 | 950.28 | | 950.58 | 0.002832 | 5.31 | 314.80 | 108.52 | 0.41 |
| US | 673.43 | Max WS | Ex2yr | 543.83 | 944.91 | 948.35 | | 948.71 | 0.005204 | 5.32 | 125.85 | 70.48 | 0.51 |
| US | 673.43 | Max WS | Prop100yr Oct2022 | 1951.82 | 944.91 | 951.91 | | 952.19 | 0.001858 | 5.15 | 503.00 | 125.62 | 0.35 |
| US | 673.43 | Max WS | Prop10yr Oct2022 | 1172.44 | 944.91 | 950.07 | | 950.39 | 0.003127 | 5.43 | 291.94 | 107.04 | 0.43 |
| US | 673.43 | Max WS | Prop2yr Oct2022 | 513.85 | 944.91 | 948.26 | | 948.61 | 0.005264 | 5.25 | 119.29 | 66.06 | 0.51 |
| | | | | | | | | | | | | | |
| US | 599.71 | Max WS | Ex-100yr | 2041.42 | 943.00 | 945.57 | 947.24 | 951.00 | 0.104269 | 19.86 | 116.89 | 66.27 | 2.19 |
| US | 599.71 | Max WS | Ex10yr | 1244.20 | 943.00 | 945.05 | 946.03 | 948.60 | 0.088916 | 15.77 | 86.46 | 52.77 | 1.95 |
| US | 599.71 | Max WS | Ex2yr | 543.82 | 943.00 | 944.38 | 944.92 | 946.13 | 0.073090 | 10.96 | 53.15 | 46.83 | 1.65 |
| US | 599.71 | Max WS | Prop100yr Oct2022 | 1951.86 | 943.00 | 945.55 | 947.02 | 950.59 | 0.097279 | 19.11 | 115.95 | 65.78 | 2.12 |
| US | 599.71 | Max WS | Prop10yr Oct2022 | 1172.39 | 943.00 | 945.01 | 946.03 | 948.32 | 0.085239 | 15.23 | 84.22 | 52.31 | 1.90 |
| US | 599.71 | Max WS | Prop2yr Oct2022 | 513.88 | 943.00 | 944.29 | 944.86 | 946.15 | 0.085347 | 11.27 | 48.65 | 45.96 | 1.77 |
| | | | | | | | | | | | | | |
| US | 526.00 | Max WS | Ex-100yr | 2041.40 | 939.00 | 943.88 | 944.28 | 945.70 | 0.021287 | 13.12 | 250.61 | 92.83 | 1.09 |
| US | 526.00 | Max WS | Ex10yr | 1244.13 | 939.00 | 943.28 | 943.23 | 944.38 | 0.014823 | 9.96 | 197.83 | 83.20 | 0.89 |
| US | 526.00 | Max WS | Ex2yr | 543.63 | 939.00 | 942.31 | | 942.85 | 0.009624 | 6.64 | 123.75 | 68.86 | 0.68 |
| US | 526.00 | Max WS | Prop100yr Oct2022 | 1951.79 | 939.00 | 943.80 | 944.15 | 945.57 | 0.020939 | 12.87 | 243.66 | 91.32 | 1.08 |
| US | 526.00 | Max WS | Prop10yr Oct2022 | 1172.34 | 939.00 | 943.22 | 943.12 | 944.25 | 0.014155 | 9.62 | 192.48 | 82.24 | 0.86 |
| US | 526.00 | Max WS | Prop2yr Oct2022 | 513.66 | 939.00 | 942.26 | | 942.77 | 0.009293 | 6.44 | 119.96 | 67.93 | 0.67 |
| | | | | | | | | | | | | | |
| US | 452.29 | Max WS | Ex-100yr | 2041.33 | 937.73 | 943.98 | | 944.25 | 0.001942 | 4.87 | 567.51 | 135.67 | 0.35 |
| US | 452.29 | Max WS | Ex10yr | 1243.98 | 937.73 | 943.27 | | 943.41 | 0.001218 | 3.55 | 473.45 | 128.89 | 0.27 |
| US | 452.29 | Max WS | Ex2yr | 543.59 | 937.73 | 942.22 | | 942.27 | 0.000562 | 2.09 | 345.73 | 114.73 | 0.18 |
| US | 452.29 | Max WS | Prop100yr Oct2022 | 1951.65 | 937.73 | 943.89 | | 944.15 | 0.001891 | 4.76 | 555.16 | 134.78 | 0.34 |
| US | 452.29 | Max WS | Prop10yr Oct2022 | 1172.24 | 937.73 | 943.19 | | 943.33 | 0.001145 | 3.41 | 464.13 | 128.17 | 0.26 |

HEC-RAS River: GreenSprings CK Reach: US Profile: Max WS (Continued)

| Reach | River Sta | Profile | Plan | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| US | 452.29 | Max WS | Prop2yr Oct2022 | 513.68 | 937.73 | 942.16 | | 942.20 | 0.000533 | 2.02 | 338.26 | 113.69 | 0.17 |
| | | | | | | | | | | | | | |
| US | 378.57 | Max WS | Ex-100yr | 2041.20 | 934.90 | 944.02 | | 944.10 | 0.000366 | 2.73 | 1224.60 | 237.48 | 0.16 |
| US | 378.57 | Max WS | Ex10yr | 1243.93 | 934.90 | 943.28 | | 943.32 | 0.000203 | 1.92 | 1053.00 | 228.74 | 0.12 |
| US | 378.57 | Max WS | Ex2yr | 543.52 | 934.90 | 942.22 | | 942.24 | 0.000073 | 1.05 | 821.82 | 207.14 | 0.07 |
| US | 378.57 | Max WS | Prop100yr Oct2022 | 1951.56 | 934.90 | 943.93 | | 944.00 | 0.000351 | 2.65 | 1202.11 | 236.00 | 0.16 |
| US | 378.57 | Max WS | Prop10yr Oct2022 | 1172.13 | 934.90 | 943.21 | | 943.25 | 0.000188 | 1.84 | 1036.07 | 227.91 | 0.11 |
| US | 378.57 | Max WS | Prop2yr Oct2022 | 513.64 | 934.90 | 942.14 | | 942.15 | 0.000068 | 1.01 | 805.33 | 205.78 | 0.07 |
| | | | | | | | | | | | | | |
| US | 281 | | | Culvert | | | | | | | | | |
| | | | | | | | | | | | | | |
| US | 231.14 | Max WS | Ex-100yr | 2039.10 | 931.00 | 935.16 | 936.59 | 939.98 | 0.068056 | 17.79 | 116.35 | 137.05 | 1.82 |
| US | 231.14 | Max WS | Ex10yr | 1243.40 | 931.00 | 934.39 | 935.41 | 937.80 | 0.071943 | 14.96 | 84.64 | 129.35 | 1.78 |
| US | 231.14 | Max WS | Ex2yr | 543.50 | 931.00 | 933.74 | 934.11 | 935.13 | 0.046381 | 9.50 | 57.98 | 120.23 | 1.35 |
| US | 231.14 | Max WS | Prop100yr Oct2022 | 1946.57 | 931.00 | 934.97 | 936.47 | 940.04 | 0.078445 | 18.26 | 108.35 | 135.41 | 1.93 |
| US | 231.14 | Max WS | Prop10yr Oct2022 | 1171.84 | 931.00 | 934.37 | 935.29 | 937.46 | 0.065930 | 14.24 | 83.83 | 129.12 | 1.70 |
| US | 231.14 | Max WS | Prop2yr Oct2022 | 513.63 | 931.00 | 933.76 | 934.04 | 934.96 | 0.038946 | 8.81 | 59.11 | 120.70 | 1.24 |
| | | | | | | | | | | | | | |
| US | 157.43 | Max WS | Ex-100yr | 2040.92 | 928.93 | 931.34 | 932.31 | 934.58 | 0.079248 | 15.08 | 142.72 | 114.30 | 1.85 |
| US | 157.43 | Max WS | Ex10yr | 1243.64 | 928.93 | 930.97 | 931.55 | 932.94 | 0.064037 | 11.87 | 112.17 | 110.76 | 1.61 |
| US | 157.43 | Max WS | Ex2yr | 543.47 | 928.93 | 930.40 | 930.74 | 931.53 | 0.063089 | 9.00 | 66.65 | 102.45 | 1.49 |
| US | 157.43 | Max WS | Prop100yr Oct2022 | 1950.51 | 928.93 | 931.30 | 932.23 | 934.40 | 0.077541 | 14.74 | 139.72 | 113.97 | 1.82 |
| US | 157.43 | Max WS | Prop10yr Oct2022 | 1171.85 | 928.93 | 930.93 | 931.47 | 932.79 | 0.062389 | 11.53 | 108.98 | 110.17 | 1.58 |
| US | 157.43 | Max WS | Prop2yr Oct2022 | 513.64 | 928.93 | 930.37 | 930.70 | 931.47 | 0.064130 | 8.88 | 63.88 | 101.90 | 1.49 |
| | | | | | | | | | | | | | |
| US | 83.71 | Max WS | Ex-100yr | 2040.91 | 925.30 | 929.12 | 929.52 | 930.73 | 0.025264 | 11.48 | 210.61 | 107.32 | 1.12 |
| US | 83.71 | Max WS | Ex10yr | 1243.74 | 925.30 | 928.44 | 928.75 | 929.73 | 0.026635 | 10.10 | 145.52 | 89.00 | 1.11 |
| US | 83.71 | Max WS | Ex2yr | 543.48 | 925.30 | 927.57 | 927.79 | 928.44 | 0.029144 | 8.00 | 76.93 | 67.99 | 1.08 |
| US | 83.71 | Max WS | Prop100yr Oct2022 | 1950.89 | 925.30 | 929.00 | 929.44 | 930.66 | 0.026652 | 12.28 | 198.45 | 104.17 | 1.17 |
| US | 83.71 | Max WS | Prop10yr Oct2022 | 1172.01 | 925.30 | 928.33 | 928.68 | 929.67 | 0.028416 | 10.98 | 135.72 | 87.42 | 1.16 |
| US | 83.71 | Max WS | Prop2yr Oct2022 | 513.65 | 925.30 | 927.48 | 927.78 | 928.46 | 0.031008 | 8.97 | 70.84 | 65.72 | 1.14 |
| | | | | | | | | | | | | | |
| US | 10 | Max WS | Ex-100yr | 2040.88 | 922.34 | 925.62 | 926.44 | 928.20 | 0.048405 | 15.64 | 174.11 | 108.60 | 1.55 |
| US | 10 | Max WS | Ex10yr | 1243.70 | 922.34 | 924.99 | 925.74 | 927.26 | 0.053040 | 14.12 | 112.92 | 83.28 | 1.56 |
| US | 10 | Max WS | Ex2yr | 543.46 | 922.34 | 924.19 | 924.79 | 926.07 | 0.064307 | 12.07 | 55.12 | 61.12 | 1.62 |
| US | 10 | Max WS | Prop100yr Oct2022 | 1950.81 | 922.34 | 925.52 | 926.41 | 928.20 | 0.052056 | 15.88 | 163.39 | 104.83 | 1.60 |
| US | 10 | Max WS | Prop10yr Oct2022 | 1171.94 | 922.34 | 924.95 | 925.65 | 927.09 | 0.050803 | 13.67 | 109.58 | 81.82 | 1.53 |
| US | 10 | Max WS | Prop2yr Oct2022 | 513.65 | 922.34 | 924.26 | 924.73 | 925.73 | 0.048677 | 10.75 | 59.01 | 63.40 | 1.41 |

# Appendix D: LID Results

| El Dorado County LID Calculator | | |
|---|---|---|
| Shed Name | GEN01 | |
| Climate station | PLACERVILLE | |
| Saturated hydraulic conductivity | 0.03 | in/hr |
| Impervious area | 1.458011938 | acres |
| Design Storm | 1.13 | inches |
| Method | Design Storm | |

| LID BMP Types | Area Needed (acres) | |
|---|---|---|
| Bioretention Cell - 18" Soil - 12" Gravel Storage | 0.10 | ac |
| Bioretention Cell - 18" Soil - 24" Gravel Storage | 0.08 | ac |
| Bioretention Cell - 18" Soil - 36" Gravel Storage | 0.06 | ac |
| Bioretention Cell - 24" Soil - 12" Gravel Storage | 0.09 | ac |
| Bioretention Cell - 24" Soil - 24" Gravel Storage | 0.07 | ac |
| Bioretention Cell - 24" Soil - 36" Gravel Storage | 0.06 | ac |
| Bioretention Cell - Soil Depth Varies5 - No Gravel Storage | 0.83 | ac |
| Infiltration Basin - Vegetated | 1.69 | ac |
| Infiltration Gallery | 0.30 | ac |
| Infiltration Trench | 1.11 | ac |
| Overland Flow no amendment | N/A | |
| Porous Pavement | 1.16 | ac |
| Strip, Amended 6" | 2.19 | ac |
| Strip, Amended 12" | 0.60 | ac |
| Strip, Amended 18" | 0.34 | ac |
| Swale, Amended 6"6 | 2.19 | ac |
| Swale, Amended 12"6 | 0.60 | ac |
| Swale, Amended 18"6 | 0.34 | ac |
| Capture and Use Storage7 | 5507.58 | cf |

*Note: Gen-01-DS and Gen-01-B contains existing downstream impervious not used in this calculation.

| El Dorado County LID Calculator | | |
|---|---|---|
| Shed Name | GEN03 | |
| Climate station | PLACERVILLE | |
| Saturated hydraulic conductivity | 0.03 | in/hr |
| Impervious area | 5.631016988 | acres |
| Design Storm | 1.13 | inches |
| Method | Design Storm | |

| LID BMP Types | Area Needed (acres) | |
|---|---|---|
| Bioretention Cell - 18" Soil - 12" Gravel Storage | 0.39 | ac |
| Bioretention Cell - 18" Soil - 24" Gravel Storage | 0.30 | ac |
| Bioretention Cell - 18" Soil - 36" Gravel Storage | 0.25 | ac |
| Bioretention Cell - 24" Soil - 12" Gravel Storage | 0.35 | ac |
| Bioretention Cell - 24" Soil - 24" Gravel Storage | 0.28 | ac |
| Bioretention Cell - 24" Soil - 36" Gravel Storage | 0.23 | ac |
| Bioretention Cell - Soil Depth Varies5 - No Gravel Storage | 3.21 | ac |
| Infiltration Basin - Vegetated | 6.52 | ac |
| Infiltration Gallery | 1.16 | ac |
| Infiltration Trench | 4.30 | ac |
| Overland Flow no amendment | N/A | |
| Porous Pavement | 4.47 | ac |
| Strip, Amended 6" | 8.47 | ac |
| Strip, Amended 12" | 2.30 | ac |
| Strip, Amended 18" | 1.33 | ac |
| Swale, Amended 6"6 | 8.47 | ac |
| Swale, Amended 12"6 | 2.30 | ac |
| Swale, Amended 18"6 | 1.33 | ac |
| Capture and Use Storage7 | 21270.92 | cf |

| El Dorado County LID Calculator | | |
|---|---|---|
| Shed Name | GEN04 | |
| Climate station | PLACERVILLE | |
| Saturated hydraulic conductivity | 0.03 | in/hr |
| Impervious area | 7.956726354 | acres |
| Design Storm | 1.13 | inches |
| Method | Design Storm | |

| LID BMP Types | Area Needed (acres) | |
|---|---|---|
| Bioretention Cell - 18" Soil - 12" Gravel Storage | 0.55 | ac |
| Bioretention Cell - 18" Soil - 24" Gravel Storage | 0.43 | ac |
| Bioretention Cell - 18" Soil - 36" Gravel Storage | 0.35 | ac |
| Bioretention Cell - 24" Soil - 12" Gravel Storage | 0.50 | ac |
| Bioretention Cell - 24" Soil - 24" Gravel Storage | 0.39 | ac |
| Bioretention Cell - 24" Soil - 36" Gravel Storage | 0.33 | ac |
| Bioretention Cell - Soil Depth Varies5 - No Gravel Storage | 4.53 | ac |
| Infiltration Basin - Vegetated | 9.22 | ac |
| Infiltration Gallery | 1.64 | ac |
| Infiltration Trench | 6.07 | ac |
| Overland Flow no amendment | N/A | |
| Porous Pavement | 6.31 | ac |
| Strip, Amended 6" | 11.97 | ac |
| Strip, Amended 12" | 3.25 | ac |
| Strip, Amended 18" | 1.88 | ac |
| Swale, Amended 6"6 | 11.97 | ac |
| Swale, Amended 12"6 | 3.25 | ac |
| Swale, Amended 18"6 | 1.88 | ac |
| Capture and Use Storage7 | 30056.18 | cf |

| El Dorado County LID Calculator | | |
|---|---|---|
| Shed Name | GEN05 | |
| Climate station | PLACERVILLE | |
| Saturated hydraulic conductivity | 0.03 | in/hr |
| Impervious area | 9.89 | acres |
| Design Storm | 1.13 | inches |
| Method | Design Storm | |

| LID BMP Types | Area Needed (acres) | |
|---|---|---|
| Bioretention Cell - 18" Soil - 12" Gravel Storage | 0.68 | ac |
| Bioretention Cell - 18" Soil - 24" Gravel Storage | 0.53 | ac |
| Bioretention Cell - 18" Soil - 36" Gravel Storage | 0.43 | ac |
| Bioretention Cell - 24" Soil - 12" Gravel Storage | 0.62 | ac |
| Bioretention Cell - 24" Soil - 24" Gravel Storage | 0.49 | ac |
| Bioretention Cell - 24" Soil - 36" Gravel Storage | 0.41 | ac |
| Bioretention Cell - Soil Depth Varies5 - No Gravel Storage | 5.63 | ac |
| Infiltration Basin - Vegetated | 11.46 | ac |
| Infiltration Gallery | 2.04 | ac |
| Infiltration Trench | 7.55 | ac |
| Overland Flow no amendment | N/A | |
| Porous Pavement | 7.85 | ac |
| Strip, Amended 6" | 14.88 | ac |
| Strip, Amended 12" | 4.04 | ac |
| Strip, Amended 18" | 2.34 | ac |
| Swale, Amended 6"6 | 14.88 | ac |
| Swale, Amended 12"6 | 4.04 | ac |
| Swale, Amended 18"6 | 2.34 | ac |
| Capture and Use Storage7 | 37360.13 | cf |

| El Dorado County LID Calculator | | |
|---|---|---|
| Shed Name | GEN06 A & C | |
| Climate station | PLACERVILLE | |
| Saturated hydraulic conductivity | 0.03 | in/hr |
| Impervious area | 16.57 | acres |
| Design Storm | 1.13 | inches |
| Method | Design Storm | |

| LID BMP Types | Area Needed (acres) | |
|---|---|---|
| Bioretention Cell - 18" Soil - 12" Gravel Storage | 1.15 | ac |
| Bioretention Cell - 18" Soil - 24" Gravel Storage | 0.89 | ac |
| Bioretention Cell - 18" Soil - 36" Gravel Storage | 0.72 | ac |
| Bioretention Cell - 24" Soil - 12" Gravel Storage | 1.04 | ac |
| Bioretention Cell - 24" Soil - 24" Gravel Storage | 0.81 | ac |
| Bioretention Cell - 24" Soil - 36" Gravel Storage | 0.68 | ac |
| Bioretention Cell - Soil Depth Varies5 - No Gravel Storage | 9.43 | ac |
| Infiltration Basin - Vegetated | 19.19 | ac |
| Infiltration Gallery | 3.42 | ac |
| Infiltration Trench | 12.65 | ac |
| Overland Flow no amendment | N/A | |
| Porous Pavement | 13.15 | ac |
| Strip, Amended 6" | 24.93 | ac |
| Strip, Amended 12" | 6.77 | ac |
| Strip, Amended 18" | 3.92 | ac |
| Swale, Amended 6"6 | 24.93 | ac |
| Swale, Amended 12"6 | 6.77 | ac |
| Swale, Amended 18"6 | 3.92 | ac |
| Capture and Use Storage7 | 62587.39 | cf |

*Area can be split between both basins

| El Dorado County LID Calculator | | |
|---|---|---|
| Shed Name | GEN06 B | |
| Climate station | PLACERVILLE | |
| Saturated hydraulic conductivity | 0.03 | in/hr |
| Impervious area | 10.38 | acres |
| Design Storm | 1.13 | inches |
| Method | Design Storm | |

| LID BMP Types | Area Needed (acres) | |
|---|---|---|
| Bioretention Cell - 18" Soil - 12" Gravel Storage | 0.72 | ac |
| Bioretention Cell - 18" Soil - 24" Gravel Storage | 0.56 | ac |
| Bioretention Cell - 18" Soil - 36" Gravel Storage | 0.45 | ac |
| Bioretention Cell - 24" Soil - 12" Gravel Storage | 0.65 | ac |
| Bioretention Cell - 24" Soil - 24" Gravel Storage | 0.51 | ac |
| Bioretention Cell - 24" Soil - 36" Gravel Storage | 0.43 | ac |
| Bioretention Cell - Soil Depth Varies5 - No Gravel Storage | 5.91 | ac |
| Infiltration Basin - Vegetated | 12.03 | ac |
| Infiltration Gallery | 2.14 | ac |
| Infiltration Trench | 7.93 | ac |
| Overland Flow no amendment | N/A | |
| Porous Pavement | 8.24 | ac |
| Strip, Amended 6" | 15.62 | ac |
| Strip, Amended 12" | 4.24 | ac |
| Strip, Amended 18" | 2.46 | ac |
| Swale, Amended 6"6 | 15.62 | ac |
| Swale, Amended 12"6 | 4.24 | ac |
| Swale, Amended 18"6 | 2.46 | ac |
| Capture and Use Storage7 | 39222.40 | cf |

| El Dorado County LID Calculator | | |
|---|---|---|
| Shed Name | GEN08 | |
| Climate station | PLACERVILLE | |
| Saturated hydraulic conductivity | 0.03 | in/hr |
| Impervious area | 8.62 | acres |
| Design Storm | 1.13 | inches |
| Method | Design Storm | |

| LID BMP Types | Area Needed (acres) | |
|---|---|---|
| Bioretention Cell - 18" Soil - 12" Gravel Storage | 0.60 | ac |
| Bioretention Cell - 18" Soil - 24" Gravel Storage | 0.46 | ac |
| Bioretention Cell - 18" Soil - 36" Gravel Storage | 0.38 | ac |
| Bioretention Cell - 24" Soil - 12" Gravel Storage | 0.54 | ac |
| Bioretention Cell - 24" Soil - 24" Gravel Storage | 0.42 | ac |
| Bioretention Cell - 24" Soil - 36" Gravel Storage | 0.36 | ac |
| Bioretention Cell - Soil Depth Varies5 - No Gravel Storage | 4.90 | ac |
| Infiltration Basin - Vegetated | 9.98 | ac |
| Infiltration Gallery | 1.78 | ac |
| Infiltration Trench | 6.58 | ac |
| Overland Flow no amendment | N/A | |
| Porous Pavement | 6.84 | ac |
| Strip, Amended 6" | 12.96 | ac |
| Strip, Amended 12" | 3.52 | ac |
| Strip, Amended 18" | 2.04 | ac |
| Swale, Amended 6"6 | 12.96 | ac |
| Swale, Amended 12"6 | 3.52 | ac |
| Swale, Amended 18"6 | 2.04 | ac |
| Capture and Use Storage7 | 32548.03 | cf |

# Appendix G

Policy and Regulation
Consistency Analysis

**Project Compliance with Applicable Land Use-Related Plans, Policies, and Regulations**

| Plan/ Policy/Regulation | Project Consistency |
|---|---|
| **El Dorado County General Plan** | |
| **Objective 2.3.1:** Provide for the retention of distinct topographical features and conservation of the native vegetation of the County. | ***Consistent.*** As discussed in Section 3.1, "Aesthetics," Section 3.1.3, "Environmental Impacts and Mitigation Measures," the project design proposes the use of RE-5 densities and open space lots to transition the extent of site development and blend with adjoining land areas. |
| **Policy 2.3.1.1:** The County shall continue to enforce the tree protection provisions in the Grading Erosion and Sediment Control Ordinance and utilize the hillside road standards. | ***Consistent.*** As discussed in Section 3.1, "Aesthetics," Section 3.1.3, "Environmental Impacts and Mitigation Measures," the project design proposes most of the existing oak woodland viewed from Green Valley Road would be retained and would partially obscure public views of the denser residential development proposed in the central portion of the site and generally blend with adjoining land areas. |
| **Objective 3.2.2:** Maintain the visual integrity of hillsides and ridge lines. | ***Consistent.*** As discussed in Section 3.1, "Aesthetics," Section 3.1.3, "Environmental Impacts and Mitigation Measures," the project design proposes the use of RE-5 densities and open space lots to transition the extent of site development and generally blend with adjoining land areas. No ridgelines exist on the project site. |
| **Policy 2.3.2.1:** Disturbance of slopes thirty (30) percent or greater shall be discouraged to minimize the visual impacts of grading and vegetation removal. | ***Consistent.*** As discussed in Section 3.1, "Aesthetics," Section 3.1.3, "Environmental Impacts and Mitigation Measures," and shown in Figure 3.6-2, the proposed project design retains the majority of areas with 30 percent or greater slopes in open space or on proposed RE-5 residential lots (5 acres and greater). |
| **Objective 2.5.1:** Provision for the visual and physical separation of communities from new development. | ***Consistent.*** As discussed in Section 3.1, "Aesthetics," Section 3.1.3, "Environmental Impacts and Mitigation Measures," the project design proposes the use of RE-5 densities and open space lots to transition the extent of site development and generally blend with adjoining land areas. |
| **Policy 2.5.1.1:** Low intensity land uses shall be incorporated into new development projects to provide for the physical and visual separation of communities.<br>Low intensity land uses may include any one or a combination of the following: parks and natural open space areas, special setbacks, parkways, landscaped roadway buffers, natural landscape features, and transitional development densities. | ***Consistent.*** As discussed in Section 3.1, "Aesthetics," Section 3.1.3, "Environmental Impacts and Mitigation Measures," the project design proposes the use of RE-5 densities and open space lots to transition the extent of site development and generally blend with adjoining land areas. |
| **Objective 2.8.1:** Lighting Standards - Provide standards, consistent with prudent safety practices, for the elimination of high intensity lighting and glare. | ***Consistent.*** As discussed in Section 3.1, "Aesthetics," Section 3.1.3, "Environmental Impacts and Mitigation Measures," features to reduce excess nighttime light and glare, such as the use of directional shielding and automatic shutoff or motion sensors, would be incorporated into the project design to comply with County and El Dorado CSD standards and requirements, additionally, the proposed RE-5 lots, open space lots, existing vegetation, and topography, as well as distance, would aid in obstructing and reducing the intensity of new light and glare sources during the day. |
| **Policy 2.8.1.1:** Development shall limit excess nighttime light and glare from parking area lighting, signage, and buildings. Consideration will be given to design features, namely directional shielding for street lighting, parking lot lighting, sport field lighting, and other significant light sources, that could reduce effects from nighttime lighting. In addition, consideration will be given to the use of automatic shutoffs or motion sensors for lighting features in rural areas to further reduce excess nighttime light. | **Consistent.** As discussed in Section 3.1, "Aesthetics," Section 3.1.3, "Environmental Impacts and Mitigation Measures," features to reduce excess nighttime light and glare, such as the use of directional shielding and automatic shutoff or motion sensors, would be incorporated into the project design to comply with County and El Dorado CSD standards and requirements, additionally, the proposed RE-5 lots, open space lots, existing vegetation, and topography, as well as distance, would aid in obstructing and reducing the intensity of new light and glare sources during the day. The El Dorado Hills Community Services District would design the park features after project approval and acquisition of the park and would |

| Plan/ Policy/Regulation | Project Consistency |
|---|---|
| | determine whether lighted sports fields or courts would be included in the future park design and identify light pollution controls under a separate project by the CSD. |
| **Objective 5.1.2**: Concurrency: Ensure through consultation with responsible service and utility purveyors that adequate public services and utilities, including fire protection, police protection, and ambulance service are provided concurrent with discretionary development or through other mitigation measures provided, and ensure that adequate school facilities are provided concurrent with discretionary development to the maximum extent permitted by State law. It shall be the policy of the County to cooperate with responsible service and utility purveyors in ensuring the adequate provision of service. Absent evidence beyond a reasonable doubt, the County will rely on the information received from such purveyors and shall not substitute its judgment for that of the responsible purveyors on questions of capacity or levels of service. | ***Consistent.*** As discussed in Section 3.13, "Public Services and Recreation," Section 3.13.3, "Environmental Impacts and Mitigation Measures," the El Dorado Hills Fire Department, ECSO, EDUHSD and RUSD, and El Dorado County and El Dorado Hills Community Services District agencies have level of service standards that the project would meet by agreements and consultation with the associated public services the service purveyors. Additionally, as discussed in Section 3.15, "Utilities and Service Systems," Section 3.15.3, "Environmental Impacts and Mitigation Measures," EID and El Dorado Disposal would both be able to serve the projects water supply, wastewater, and solid waste disposal needs, respectively. El Dorado Local Agency Formation Commission approval of project annexation to EID, El Dorado Hills Fire Department, and El Dorado Hills Community Services District service areas would be required. |
| **Policy 5.1.2.1:** Prior to the approval of any discretionary development, the approving authority shall make a determination of the adequacy of the public services and utilities to be impacted by that development. Where, according to the purveyor responsible for the service or utility as provided in Table 5-1(Draft EIR Table 3.13-1), demand is determined to exceed capacity, the approval of the development shall be conditioned to require expansion of the impacted facility or service to be available concurrent with the demand, mitigated, or a finding made that a CIP [Capital Improvements Plan] project is funded and authorized which will increase service capacity. | ***Consistent.*** As discussed in Section 3.13, "Public Services and Recreation," Section 3.13.3, "Environmental Impacts and Mitigation Measures," public service provision for public services and parks would not conflict with this Policy. Additionally, as discussed in Section 3.15, "Utilities and Service Systems," Section 3.15.3, "Environmental Impacts and Mitigation Measures," based on the EID 2022 Water Supply and Demand Report and the EID 2020 UWMP, water supply would be adequate to accommodate the project under normal-, dry-, and multiple-dry-year water conditions. Additionally, the constituents in the wastewater flow from the project to the EDHWWTP would be within the plant's capacity. The solid waste facilities would experience a small increase from the project and would not consume a substantial proportion of the available permitted capacity and would not trigger the need to expand the Potrero Hills Landfill. |
| **Policy 5.1.2.2:** Provision of public services to new discretionary development shall not result in a reduction of service below minimum established standards to current users, pursuant to Table 5-1 (Draft EIR Table 3.13-1). | ***Consistent.*** The project would be required to comply with level of service standards (discussed above under Policy 5.1.2.1) that would address public services and their providers to be consistent with the General Plan. |
| **Policy 5.1.2.3:** New development shall be required to pay its proportionate share of the costs of infrastructure improvements required to serve the project to the extent permitted by State law. Lack of available public or private services or adequate infrastructure to serve the project which cannot be satisfactorily mitigated shall be grounds for denial of any project or cause for the reduction of size, density, and/or intensity otherwise indicated on the General Plan land use map to the extent allowed by State law. | ***Consistent.*** As discussed in Chapter 2, "Project Description," and Section 3.15, "Utilities and Service Systems," Section 3.15.3, "Environmental Impacts and Mitigation Measures," the project proposes to incorporate off-site improvements into its design to adequately service water supply and wastewater needs of the project. |
| **Objective 5.2.1:** County-Wide Water Resource Program. Establish a county-wide water resources development and management program to include the activities necessary to ensure adequate future water supplies consistent with the General Plan. | ***Consistent.*** As discussed in Section 3.15, "Utilities and Service Systems," Section 3.15.3, "Environmental Impacts and Mitigation Measures," adequate water supply is available to accommodate the project consistent with this General Plan Objective. |
| **Policy 5.2.1.2:** An adequate quantity and quality of water for all uses, including fire protection, shall be provided for with discretionary development. | ***Consistent.*** As discussed in Section 3.15, "Utilities and Service Systems," Section 3.15.2, "Environmental Settings," the facility plan report for the project, which was accepted by EID on February 9, 2022, stated that sufficient equivalent dwelling units (EDUs) of water supply were available in |

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| | the El Dorado Hills Water Supply Region in 2021. The facility report includes improvements needed for sufficient fire flow per EDHFPD requirements. EID has developed and maintains several water resource plans: a UWMP, an IWRMP, and the 2022 Water Supply and Demand Report to determine sufficient supply for the project to connect to the public water system. |
| **Policy 5.2.1.3:** All medium-density residential, high-density residential, multifamily residential, commercial, industrial and research and development projects may be required to connect to public water systems if reasonably available when located within Community Regions and to either a public water system or to an approved private water systems in Rural Centers. | ***Consistent.*** The project would obtain public water service from EID. El Dorado Local Agency Formation Commission approval of project annexation to the EID service area would be required. |
| **Policy 5.2.1.4:** Rezoning and subdivision approvals in Community Regions or other areas dependent on public water supply shall be subject to the availability of a permanent and reliable water supply. | ***Consistent.*** The project would be required to comply with level of service standards that would address water supply and connections to EID's public services to be consistent with the General Plan. The reader is also referred to the consistency analysis for Policy 5.2.1.2. |
| **Policy 5.2.1.9:** In an area served by a public water purveyor or an approved private water system, the applicant for a tentative map or for a building permit on a parcel that has not previously complied with this requirement must provide a Water Supply Assessment that contains the information that would be required if a water supply assessment were prepared pursuant to Water Code section 10910. In order to approve the tentative map or building permit for which the assessment was prepared the County must **(a)** find that by the time the first grading or building permit is issued in connection with the approval, the water supply from existing water supply facilities will be adequate to meet the highest projected demand associated with the approval on the lands in question; and **(b)** require that before the first grading permit or building permit is issued in connection with the approval, the applicant will have received a sufficient water meters or a comparable supply guarantee to provide adequate water supply to meet the projected demand associated with the entire approval. A water supply is adequate if the total entitled water supplies available during normal, single, dry, and multiple-dry years within a 20-year projection will meet the highest projected demand associated with the approval, in addition to existing and 20-year projected future uses within the area served by the water supplier, including but not limited to, fire protection, agricultural, and industrial uses, 95% of the time, with cutbacks calculated not to exceed 20% in the remaining 5% of the time. | ***Consistent.*** The project is not subject to Water Code Section 10910. However, a detailed analysis of water supply availability consistent with this policy is provided in Section 3.15, "Utilities and Service Systems," Section 3.15.3, "Environmental Impacts and Mitigation Measures." |
| **Policy 5.2.1.11:** The County shall direct new development to areas where public water service already exists. In Community Regions, all new development shall connect to a public water system. In Rural Centers, all new development shall connect either to a public water system or to an approved private water system. | ***Consistent.*** The project would obtain public water service from EID. El Dorado Local Agency Formation Commission approval of project annexation to the EID service area would be required. |
| **Objective 5.3.1:** Wastewater Capacity. Ensure the availability of wastewater collection and treatment facilities of adequate capacity to meet the needs of multifamily, high-, and medium-density residential areas, and commercial and industrial areas. | ***Consistent.*** As discussed in Section 3.15, "Utilities and Service Systems," Section 3.15.3, "Environmental Impacts and Mitigation Measures," the constituents in the wastewater flow from the project to the EDHWWTP would be within the plant's treatment capacity. The project also includes off-site wastewater improvements to accommodate flows. |

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| **Policy 5.3.1.1:** High-density and multifamily residential, commercial, and industrial projects may be required to connect to public wastewater collection facilities if reasonably available as a condition of approval. In the Rural Centers of Camino/Cedar Grove/Pollock Pines, the long-term development of public sewer service shall be encouraged. | ***Consistent.*** The project would be required to connect to EID's public wastewater collection facilities that would address the wastewater needs for the project. |
| **Policy 5.3.1.7:** In Community Regions, all new development shall connect to public wastewater treatment facilities. In Community Regions where public wastewater collection facilities do not exist project applicants must demonstrate that the proposed wastewater disposal system can accommodate the highest possible demand of the project. | ***Consistent.*** The project would be required to connect to EID's public wastewater collection facilities that would address the wastewater needs for the project. El Dorado Local Agency Formation Commission approval of project annexation to the EID service area would be required. |
| **Objective 5.4.1:** Initiate a County-wide drainage and flood management program to prevent flooding, protect soils from erosion, and minimize impacts on existing drainage facilities. | ***Consistent.*** As discussed in Section 3.9, "Hydrology and Water Quality," Section 3.9.1, "Regulatory Setting," The County's Drainage Manual requires that a hydrologic and hydraulic analysis be submitted for all proposed drainage facilities. The analysis must include an introduction/background, location map/description, catchment description/delineation, hydrologic analysis, hydraulic and structural analysis, risk assessment/impacts discussion, unusual or special conditions, conclusions, and technical appendices. A Storm Drainage Evaluation was conducted based on the project design and is provided in Appendix F. The Storm Drainage Evaluation documents that proposed drainage improvements would address water quality and offset project increases in drainage flows off-site. |
| **Policy 5.4.1.1.** Require storm drainage systems for discretionary development that protect public health and safety, preserve natural resources, prevent erosion of adjacent and downstream lands, prevent the increase in potential for flood hazard or damage on either adjacent, upstream or downstream properties, minimize impacts to existing facilities, meet the National Pollution Discharge Elimination System (NPDES) requirements, and preserve natural resources such as wetlands and riparian areas. | ***Consistent.*** See response to Objective 5.4.1. |
| **Policy 5.4.1.2:** Discretionary development shall protect natural drainage patterns, minimize erosion, and ensure existing facilities are not adversely impacted while retaining the aesthetic qualities of the drainage way. | ***Consistent.*** With the exception of proposed restoration of the existing on-site ponds, the project design retains the on-site drainage features within proposed open space lots. |
| **Objective 5.5.2:** Recycling, Transformation, and Disposal Facilities. Ensure that there is adequate capacity for solid waste processing, recycling, transformation, and disposal to serve existing and future users in the County. | ***Consistent.*** As discussed in Section 3.15, "Utilities and Service Systems," Section 3.15.3, "Environmental Impacts and Mitigation Measures," there is capacity for solid waste pick up and removal from El Dorado Disposal, at the Diamond Springs MFR and the Potrero Hills Landfill to service the project. |
| **Policy 5.5.2.1:** Concurrent with the approval of new development, evidence will be required that capacity exists within the solid waste system for the processing, recycling, transformation, and disposal of solid waste. | ***Consistent.*** See response to Objective 5.5.2. |
| **Objective 5.6.2:** Encourage development of energy-efficient buildings, subdivisions, development, and landscape designs | ***Consistent.*** Mitigation Measure 3.7-1a would require the installation of EV charging infrastructure, which would promote the adoption of EV vehicles at a higher rate compared to the Statewide average and would decrease the use of non-renewable fossil fuels associated with the project. Mitigation Measure 3.14-2 would assist in reducing VMT, and therefore fossil fuel consumption, by requiring that a Transportation Demand Management (TDM) program be implemented. Collectively, these measures would reduce fossil fuel consumption and increase renewable energy sources, consistent |

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| | with the requirements of Appendix F of the State CEQA Guidelines to conserve energy |
| **Policy 5.6.2.1:** Require energy conserving landscaping plans for all projects requiring design review or other discretionary approval. | ***Consistent.*** As discussed in Section 3.5, "Energy," the project would be subject to energy efficiency requirements of the 2022 California Energy Code. |
| **Policy 5.6.2.2:** All new subdivisions should include design components that take advantage of passive or natural summer cooling and/or winter solar access, or both, when possible. | ***Consistent.*** The project is required to comply with the California Building Code and CalGreen (discussed above) that would address passive energy conservation measures for the project design and be consistent with the General Plan. |
| **Objective 5.7.1:** Fire Protection (Community Regions): Ensure sufficient emergency water supply, storage, and conveyance facilities are available, and that adequate access is provided for, concurrent with development. | ***Consistent.*** As discussed in Section 3.15, "Utilities and System Services," EID Facility Improvement letter identifies project proposed improvements for water supply would provide water flow to meet fire protection needs. Section 3.14, "Transportation," identifies that the project design provides adequate access points for emergency vehicle access. |
| **Policy 5.7.1.1:** Prior to approval of new development, the applicant will be required to demonstrate that adequate emergency water supply, storage, conveyance facilities, and access for fire protection either are or will be provided concurrent with development. | ***Consistent.*** The project would be required to comply with level of service standards (discussed above) that would address fire protection and water supply standards and be consistent with the General Plan. |
| **Objective 5.7.3**: Law Enforcement: An adequate, comprehensive, coordinated law enforcement system consistent with the needs of the community. | ***Consistent.*** As discussed in Section 3.13, "Public Services and Recreation," EDSO responded that they had no concerns regarding serving the project. |
| **Policy 5.7.3.1:** Prior to approval of new development, the Sheriff's Department shall be requested to review all applications to determine the ability of the department to provide protection services. The ability to provide protection to existing development shall not be reduced below acceptable levels as a consequence of new development. Recommendations such as the need for additional equipment, facilities, and adequate access may be incorporated as conditions of approval. | ***Consistent.*** See response to Objective 5.7.3. |
| **Objective 5.7.4:** Medical Emergency Services**:** Adequate medical emergency services available to serve existing and new development recognizing that levels of service may differ between Community Regions, and Rural Centers and Regions | ***Consistent.*** As discussed in Section 3.13, "Public Services and Recreation," the El Dorado Hills Fire Department identified that the project is not expected to affect the ability to provide emergency services (fire and medical) and would be able to meet the minimum required response time. |
| **Policy 5.7.4.1:** Prior to approval of new development, the applicant shall be required to demonstrate that adequate medical emergency services are available and that adequate emergency vehicle access will be provided concurrent with development. | ***Consistent.*** See response to Objective 5.7.4. |
| **Policy 5.7.4.2:** Prior to approval of new development, the Emergency Medical Services Agency shall be requested to review all applications to determine the ability of the department to provide protection services. The ability to provide protection to existing development shall not be reduced below acceptable levels as a consequence of new development. Recommendations such as the need for additional equipment, facilities, and adequate access may be incorporated as conditions of approval. | ***Consistent.*** See response to Objective 5.7.4. |

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| **Objective 5.8.1:** School Capacity. Require that adequate school capacity exists and/or appropriate mitigation consistent with State law to serve new residents concurrent with development. | ***Consistent.*** The EHUHSD and RUSD both have adequate capacity to serve students that may move into the area as a result of the project, while maintaining a level of service consistent with the school district's capacity. The project would also pay development fees that would be directed towards the school to fund additional capacity for new students. Government Code Section 65995(h) states that the payment or satisfaction of a fee, charge, or other requirement levied or imposed under Section 17620 of the Education Code is deemed to be full and complete mitigation of the impact for the planning, use, development, or provision of adequate school facilities. |
| **Policy 5.8.1.1:** School districts affected by a proposed development shall be relied on to evaluate the development's adverse impacts on school facilities or the demand therefor. No development that will result in such impacts shall be approved unless:<br>▶ To the extent allowed by State law, the applicant and the appropriate school district(s) have entered into a written agreement regarding the mitigation of impacts to school facilities; or<br>▶ The impacts to school facilities resulting from the development are mitigated, through conditions of approval, to the greatest extent allowed by State law. | ***Consistent.*** See response to Objective 5.8.1. |
| **Objective 6.2.1:** Defensible Space: All existing and new development and structures shall meet "defensible space" requirements to minimize wildland fire hazards. | ***Consistent.*** The proposed Generations at Green Valley Wildland Urban Interface Fire Protection Plan (Fire Safe Plan or FSP) is provided in Appendix J and addresses potential impacts resulting from wildland fire hazards and identifies measures necessary to mitigate these hazards in conformance with CCR Title 14, Sections 1270 through 1276 (Fire Safe Regulations), CCR Title 24, Part 9, Section 4903 (Plans), El Dorado County Fire Protection Standard W-002 (Wildland Interface Fire Protection Plans), and El Dorado County General Plan Policy 6.2.2.2. The FSP includes defensible space and vegetation management measures. The FSP was approved by the El Dorado Hills Fire Department Fire Marshal (Chrishana Fields) and the CAL FIRE Battalion Chief (Jeff Hoag). |
| **Policy 6.2.1.1:** Implement Fire Safe ordinance to attain and maintain defensible space through conditioning of tentative maps and in new development at the final map and/or building permit stage. | ***Consistent.*** See response to Objective 6.2.1. |
| **Policy 6.2.1.2:** Coordinate with the local Fire Safe Councils, California Department of Forestry and Fire Protection (CAL FIRE), and federal and state agencies having land use jurisdiction in El Dorado County in the development of a countywide fuels management strategy. | ***Consistent.*** See response to Objective 6.2.1. |
| **Policy 6.2.1.3**: Require all existing and new residential development in State Responsibility Areas (SRAs) and/or very high Fire Hazard Severity Zones (VHFHSZs) to enforce fire-resistant landscaping and defensible space requirements that meet or exceed Title 14, Code of California Regulations (CCR), Division 1.5, Chapter 7, Subchapter 2, Articles 1-5 (commencing with Section 1270) (State Minimum Fire Safe regulations) and Subchapter 3, Article 3 (commencing with Section 1299.01) (Fire Hazard Reduction around Buildings and Structures Regulations). Adequate compliance with these | ***Consistent.*** See response to Objective 6.2.1. The FSP demonstrates compliance with applicable State and local defensible space requirements. |

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| requirements shall be determined by the local Fire Protection Districts (FPDs) or other local fire agencies, as appropriate | |
| **Policy 6.2.1.4:** Require consistency with fire code and development standards that ensure adequate defensible space clearance around all existing and new structures in compliance with the California Fire Code, Public Resources Code Section 4291 (ember-resistant zone), Government Code Section 51175-51188, CCR Title 14, Division 1.5, Chapter 7, Subchapter 3, Section 1299.03, and in the County Code of Ordinances Chapter 8.09 | ***Consistent.*** See response to Objective 6.2.1. The FSP demonstrates compliance with applicable State and local defensible space requirements. |
| **Policy 6.2.1.5:** Maintain and enforce the County Defensible Space Ordinance and Fire Prevention Programs and Plans in coordination with local the VHFHSZs and other fire agencies and continue to support related fire prevention programs associated with defensible space inspections as detailed in County Code of Ordinances Chapter 8.09, fire development standards, and public education | ***Consistent.*** See response to Objective 6.2.1. The FSP demonstrates compliance with applicable local defensible space requirements. |
| **Objective 6.2.2:** Limitations to Development: Regulate development in areas of high and very high fire hazard as designated by the California Department of Forestry and Fire Prevention Fire Hazard Severity Zone Maps. | ***Consistent.*** The project is located in a High FHSZ in a SRA for fire management. Generations at Green Valley Wildland Urban Interface Fire Protection Plan (Fire Safe Plan or FSP) is provided in Appendix J and addresses potential impacts resulting from wildland fire hazards and identifies measures necessary to mitigate these hazards. The FSP includes defensible space and vegetation management measures. The FSP was approved by the El Dorado Hills Fire Department Fire Marshal (Chrishana Fields) and the CAL FIRE Battalion Chief (Jeff Hoag). |
| **Policy 6.2.2.1:** Fire Hazard Severity Zone Maps shall be consulted in the review of all projects so that standards and mitigation measures appropriate to each hazard classification can be applied. Land use densities and intensities shall be determined by mitigation measures in areas designated as high or very high fire hazard. | ***Consistent.*** See response to Objective 6.2.2. |
| **Policy 6.2.2.2:** The County shall preclude development in areas of high and very high wildland fire hazard or in areas identified as wildland-urban interface (WUI) communities within the vicinity of Federal lands that are a high risk for wildfire, as listed in the Federal Register Executive Order 13728 of May 18, 2016, unless such development can be adequately protected from wildland fire hazard, as demonstrated in a WUI Fire Safe Plan prepared by a qualified professional as approved by the El Dorado County Fire Prevention Officers Association. The WUI Fire Safe Plan shall be approved by the local Fire Protection District having jurisdiction and/or California Department of Forestry and Fire Protection. (Resolution 124- 2019, August 6, 2019) | ***Consistent.*** See response to Objective 6.2.2. |
| **Objective 6.2.3:** Adequate Fire Protection: Application of uniform fire protection standards to development projects by fire district. | ***Consistent.*** The proposed Generations at Green Valley Wildland Urban Interface Fire Protection Plan (Fire Safe Plan or FSP) is provided in Appendix J and addresses potential impacts resulting from wildland fire hazards and identifies measures necessary to mitigate these hazards in conformance with CCR Title 14, Sections 1270 through 1276 (Fire Safe Regulations), CCR Title 24, Part 9, Section 4903 (Plans), El Dorado County Fire Protection Standard W-002 (Wildland Interface Fire Protection Plans), and El Dorado County General Plan Policy 6.2.2.2. The FSP addresses water supply, access, |

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| | structural ignitability and ignition resistive building features, fire protection systems and equipment, impacts to existing emergency services, defensible space, vegetation management, emergency vehicle access, and evacuation. This plan identifies fuel modification/management zones and recommends the types and methods of treatment that will protect this project and its essential infrastructure. In addition, this FSP recommends enhanced fire protection measures that the project HOA, and individual property owners will take to reduce the probability of structural ignition during the occupancy phase of the project. The FSP was approved by the El Dorado Hills Fire Department Fire Marshal (Chrishana Fields) and the CAL FIRE Battalion Chief (Jeff Hoag). |
| **Policy 6.2.3.1:** As a requirement for approving new development, the County must find, based on information provided by the applicant and the responsible FPD that, concurrent with development, adequate emergency and peak load water supply, water flow, fire access, and firefighting personnel and equipment will be available in accordance with applicable State and local fire district standards to support fire suppression efforts. | ***Consistent.*** See response to Objective 6.2.3. |
| **Policy 6.2.3.2:** As a requirement of new development, the applicant must demonstrate that adequate access exists, or can be provided to ensure that emergency vehicles can access the site and private vehicles can evacuate the area. | ***Consistent.*** See response to Objective 6.2.3. |
| **Policy 6.2.3.4:** All new development and public works projects shall be consistent with applicable State Wildland Fire Standards and other relevant State and federal fire requirements. | ***Consistent.*** See response to Objective 6.2.3. The FSP demonstrates compliance with applicable State and local fire requirements. |
| **Policy 6.2.3.5:** Identify actions to ensure noncompliant development meets current fire safe standards and road standards as defined in Title 14 CCR, Division 1.5, Chapter 7 Fire Protection, Subchapter 2, Articles 1-5, SRA Fire Safe Regulations through the WUI Fire Safe Plan review process and through collaboration with the FPDs and local fire agencies when reviewing Fire Protection Plans and provisions for new development. | ***Consistent.*** See response to Objective 6.2.3. |
| **Policy 6.2.3.6:** All new development within an SRA or very high (VHFHSZs) shall prepare a Fire Protection Plan that complies with established fire safety standards. Ingress and egress to the new development will be constructed utilizing the most current State Fire Safe Regulations, Fire Code, and/or County Code that meets these minimum requirements. Key components of a Fire Protection Plan include:<br>1. risk analysis;<br>2. fire response capabilities;<br>3. fire safety requirements – defensible space, infrastructure, and building ignition resistance;<br>4. mitigation measures and design considerations for non-conforming fuel modification;<br>5. wildfire education, maintenance, and limitations, and<br>6. evacuation planning. | ***Consistent.*** See response to Objective 6.2.3. |

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| Existing development within an SRA or VHFHSZ can meet these requirements through retro-fitting and home hardening. | |
| **Policy 6.2.3.7:** Enforce the most recent California Uniform Building Code Fire Code to safeguard life and property from the hazards of fires and explosions; dangerous conditions arising from the storage, handling, and use of hazardous materials and devices; and hazardous conditions in the use or occupancy of building or premises. | ***Consistent.*** See response to Objective 6.2.3. The FSP demonstrates compliance with applicable State fire requirements. |
| **Objective 6.2.4:** Area-Wide Fuel Management Program: Reduce fire hazard through cooperative fuel management activities. | ***Consistent.*** The proposed Generations at Green Valley Wildland Urban Interface Fire Protection Plan (Fire Safe Plan or FSP) is provided in Appendix J and addresses potential impacts resulting from wildland fire hazards and identifies measures necessary to mitigate these hazards in conformance with CCR Title 14, Sections 1270 through 1276 (Fire Safe Regulations), CCR Title 24, Part 9, Section 4903 (Plans), El Dorado County Fire Protection Standard W-002 (Wildland Interface Fire Protection Plans), and El Dorado County General Plan Policy 6.2.2.2. The FSP addresses water supply, access, structural ignitability and ignition resistive building features, fire protection systems and equipment, impacts to existing emergency services, defensible space, vegetation management, emergency vehicle access, and evacuation. This plan identifies fuel modification/management zones and recommends the types and methods of treatment that will protect this project and its essential infrastructure. In addition, this FSP recommends enhanced fire protection measures that the project HOA, and individual property owners will take to reduce the probability of structural ignition during the occupancy phase of the project. The FSP was approved by the El Dorado Hills Fire Department Fire Marshal (Chrishana Fields) and the CAL FIRE Battalion Chief (Jeff Hoag). |
| **Policy 6.2.4.1:** Discretionary development within high and very high fire hazard areas shall be conditioned to designate fuel break zones that comply with fire safe requirements to benefit the new and, where possible, existing development. | ***Consistent.*** See response to Objective 6.2.4. |
| **Policy 6.2.4.2:** The County shall cooperate with CAL FIRE and local FPDs to identify opportunities for fuel breaks in zones of high and very high fire hazard either prior to or as a component of project review and will support the FPDs in tracking grants to fund fire breaks and their long-term maintenance. | ***Consistent.*** See response to Objective 6.2.4. |
| **Policy 6.2.4.3:** Require fuel modification around homes and subdivision developments in SRAs or VHFHSZs by assisting the local FPDs and other local fire agencies. | ***Consistent.*** See response to Objective 6.2.4. |
| **Objective 6.3.1:** Building and Site Standards. Adopt and enforce development regulations, including building and site standards, to avoid social dislocations, which refer to the disruption or displacement of communities, and protect against seismic and geologic hazards. | ***Consistent.*** As discussed in Section 3.6, "Geology, Soils, and Paleontological Resources," Section 3.6.3, "Environmental Impacts and Mitigation Measures," in the General Plan EIR, this particular portion of the Foothills Fault System has a low level of seismic activity. Nevertheless, the project would be required to comply with the CBC regarding Chapter 16, Structural Design, which identifies both general building structural design requirements and specific seismic safety design requirements for projects. These seismic design criteria are also included as recommendations in the Geotechnical Study Update. Standard regulatory compliance with the CBC and incorporation of the Geotechnical Study Update recommendations would minimize the project's potential to cause direct or indirect adverse effects, including risk of loss, injury, or death, involving strong seismic shaking. |

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| **Policy 6.3.1.1:** The County shall require that all discretionary projects and all projects requiring a grading permit, or a building permit that would result in earth disturbance, that are located in areas likely to contain naturally occurring asbestos (based on mapping developed by the California Department of Conservation [DOC]) comply with the Air Quality Management District (AQMD) Rules 223, 223-1 and 223-2 requirements. The Department of Transportation and the AQMD shall consider the requirement of posting a warning sign at the work site in areas likely to contain naturally occurring asbestos based on the mapping developed by the DOC. | ***Consistent.*** As discussed in Section 3.2, "Air Quality," Section 3.2.3, "Environmental Impacts and Mitigation Measures," NOA is present in the project area. Mitigation Measure 3.2-1c would Implement Asbestos Dust Mitigation Consistent with EDCAQMD Rule 223-1, EDCAQMD Rule 223-2 and County Ordinance 4548 to prepare an Asbestos Dust Mitigation Plan before the start of construction and therefore would ensure compliance with all EDCAQMD rules. |
| **Objective 6.3.2:** County-Wide Seismic Hazards. Continue to evaluate seismic related hazards such as liquefaction, landslides, avalanche, and seiche, particularly in the Tahoe Basin. | ***Consistent.*** See response to Objective 6.3.1. |
| **Policy 6.3.2.4**: Applications for development of habitable structures shall be reviewed for potential hazards associated with steep or unstable slopes, areas susceptible to high erosion, and avalanche risk. Geotechnical studies shall be required when development may be subject to geological hazards. If hazards are identified, applicants shall be required to mitigate or avoid identified hazards as a condition of approval. If no mitigation is feasible, the project will not be approved. | ***Consistent.*** See response to Objective 6.3.1. |
| **Objective 6.5.1**: Protection of Noise-Sensitive Development: Protect existing noise-sensitive developments (e.g., hospitals, schools, churches and residential) from new uses that would generate noise levels incompatible with those uses. | ***Consistent.*** As discussed in Section, "Noise and Vibration," Section 3.11.3, "Environmental Impacts and Mitigation Measures," Mitigation Measure 3.11-3, would ensure that HVAC systems comply with stationary noise standards in General Plan Table HS-4. |
| **Policy 6.5.1.11:** The standards outlined Table HS-5, Table HS-6, and Table HS-7 shall not apply to those activities associated with actual construction of a project as long as such construction occurs between the hours of 7 a.m. and 7 p.m., Monday through Friday, and 8 a.m. and 5 p.m. on weekends, and on federally- recognized holidays. Further, the standards outlined in Tables HS-5, HS-6, and HS-7 shall not apply to public projects to alleviate traffic congestion and safety hazards. | ***Consistent.*** The project would be required to comply with Mitigation Measure 3.11-1 that would limit the hours of construction activity consistent with this Policy. |
| **Policy 6.5.1.13**: When determining the significance of impacts and appropriate mitigation to reduce those impacts for new development projects, including ministerial development, the following criteria shall be taken into consideration:<br>A. In areas in which ambient noise levels are in accordance with the standards in Table HS-3, increases in ambient noise levels caused by new non transportation noise sources that exceed 5 dBA shall be considered significant; and<br>B. In areas in which ambient noise levels are not in accordance with the standards in Table HS-3, increases in ambient noise levels caused by new non transportation noise sources that exceed 3 dBA shall be considered significant. | ***Consistent.*** As discussed in Section 3.11, "Noise and Vibration," Section 3.11.3, "Environmental Impacts and Mitigation Measures," long-term stationary impacts are assessed in conjunction with the County's noise performance standards and General Plan Policy 6.5.1.13. |

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| **Objective 6.6.1:** Regulation of Hazardous Materials. Regulate the use, storage, manufacture, transport, and disposal of hazardous materials in accordance with State and Federal regulations. | ***Consistent.*** As discussed in Section 3.8, "Hazards and Hazardous Materials," Section 3.8.3, "Environmental Impacts and Mitigation Measures," Mitigation Measure 3.8-1 would address the proper removal of potential on-site hazardous materials. |
| **Policy 6.6.1.1:** The Hazardous Waste Management Plan shall serve as the implementation program for management of hazardous waste in order to protect the health, safety, property of residents and visitors, and to minimize environmental degradation while maintaining economic viability. | ***Consistent.*** See response to Objective 6.6.1. |
| **Policy 6.6.1.2:** Prior to the approval of any subdivision of land or issuing of a permit involving ground disturbance, a site investigation, performed by a Registered Environmental Assessor or other person experienced in identifying potential hazardous wastes, shall be submitted to the County for any subdivision or parcel that is located on a known or suspected contaminated site included in a list on file with the Environmental Management Department as provided by the State of California and federal agencies. If contamination is found to exist by the site investigations, it shall be corrected and remediated in compliance with applicable laws, regulations, and standards prior to the issuance of a new land use entitlement or building permit. | ***Consistent.*** The project has completed a Phase I Environmental Site Assessment and is provided in Appendix E. |
| **Objective 6.10.1:** Encourage Water Efficiency. Promote cost-effective water conservation and water efficiency measures. | ***Consistent.*** As discussed in Section 3.15, "Utilities and Service Systems," Section 3.15.3, "Environmental Impacts and Mitigation Measures," based on the EID 2022 Water Supply and Demand Report and the EID 2020 UWMP, water supply would be adequate to accommodate the project under normal-, dry-, and multiple-dry-year water conditions. Upon annexation to EID, the project would be subject to EID's water conservation and efficiency requirements. The project would construct and fund its own off-site water facility improvements. |
| **Policy 6.10.1.3:** Require new development to demonstrate that adequate water is available before project approval and to fund its fair-share costs associated with the provision of water service. | ***Consistent.*** See response to Objective 6.10.1. |
| **Objective 6.11.1:** Evacuation Route Identification. Identify and analyze emergency evacuation routes and areas without at least two evacuation routes. | ***Consistent.*** As identified in Chapter 2, "Project Description," the project proposes two access points to Green Valley Road as well as an emergency access/egress (EAE) at Lima Way to serve as a secondary means of emergency access and evacuation that would be gated but designed to be accessible by project residents during an evacuation order. Appendix L of the Generations at Green Valley Wildland Urban Interface Fire Protection Plan consists of the Generations at Green Valley Wildfire Evacuation Study (WES) prepared for the project. The WES was prepared per the guidance provided by CAL FIRE, El Dorado Hills Fire Department, and the El Dorado County Sheriff's Office of Emergency Services (OES). The objective of the WES is to identify evacuation routes for the project and determine if there are significant impacts in the ability to safely evacuate the project occupants and/or if the project has a significant impact on the ability of the surrounding community to concurrently evacuate during a larger area wildfire evacuation scenario. Based on the WES, implementation of the project would not create traffic congestion that extends into the evacuation zone and would not substantially impede evacuation. El Dorado County OES |

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| | has identified the need for special traffic signal operations during an evacuation to improve traffic flow along the Green Valley Road corridor that would be implemented through Mitigation Measure 3.17-1. |
| **Policy 6.11.1.1:** Continue to improve transportation corridors that support effective evacuation routes and access for the public and emergency responders by identifying residential developments in hazard areas that do not have at least two emergency evacuation routes and work with affected residents to help prepare them to anticipate their evacuation alternatives (e.g., public transit, carpooling, shelter in place) | ***Consistent.*** See response to Objective 6.11.1. |
| **Objective 6.11.2:** Evacuation Route Maintenance**.** Ensure viability of future use of evacuation routes. | ***Consistent.*** See response to Objective 6.11.1. |
| **Policy 6.11.2.1:** Development shall be served by a street system with at least two evacuation routes capable of carrying peak load traffic and have sufficient capacity to meet project needs, or they must provide the necessary capacity to ensure the development has adequate fire protection and safe ingress and egress routes in conformance with the California Fire Safe Regulations (Section 1273 and 1274) of the California Code of Regulations – Title 14, Division 1.5, Chapter 7, Articles 2 and 3). | ***Consistent.*** See response to Objective 6.11.1. The FSP also addressed emergency vehicle access in addition to evacuation. |
| **Policy 6.11.2.2:** Construction of new roads, streets, and evacuation routes must be adequate in terms of width, turning radius, and grade to facilitate access by firefighting apparatus. Priorities for road improvements will be based on evacuation accessibility | ***Consistent.*** As described in Chapter 2, "Project Description," the project would include an emergency access/egress (EAE) at Lima Way to serve as a secondary means of emergency access and evacuation that would be gated but designed to be accessible by project residents during an evacuation order. There would also be two emergency vehicle access (EVA) road connections at Marden Drive and at East Green Springs Road (to the south) that would be stubbed to the property line for emergency vehicle use. While the Marden Drive EVA would physically connect to Marden Drive, East Green Springs Road would need to be extended off-site for approximately 50 feet to connect to the project's EVA at the property line. This connection to Green Springs Ranch would only occur if the Green Springs Ranch Association chooses to complete the extension in the future and at their discretion. These accesses would meet the design standards for gated developments as described in Section 130.30.090(D) of the El Dorado County Code of Ordinances and the El Dorado Hills Fire Department Ordinance 2022-01 |
| **Policy 6.11.2.4:** Continue to coordinate with the County Sheriff's Department, CAL FIRE, local FPDs, and other fire agencies to identify, assess, and maintain evacuation routes to support the adequate capacity, safety, and viability of those routes under a range of emergency scenarios. Identify designated evacuation routes that are not compliant with Fire Safe Regulations (14 CCR Section 1270.00) for roadway standards and develop a plan to bring those roads into conformance to promote adequate and safe accessibility in communities | ***Consistent.*** See response to Objective 6.11.1. |
| **Objective 7.1.2:** Erosion/Sedimentation - Minimize soil erosion and sedimentation. | ***Consistent.*** As discussed in Section 3.9, "Hydrology and Water Quality," Section 3.9, "Environmental Impacts and Mitigation Measures," the project would be required to comply with State and County standards during construction, including the development and implementation of a storm water pollution prevention plan (SWPPP). |

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| **Policy 7.1.2.2:** Discretionary and ministerial projects that require earthwork and grading, including cut and fill for roads, shall be required to minimize erosion and sedimentation, conform to natural contours, maintain natural drainage patterns, minimize impervious surfaces, and maximize the retention of natural vegetation. Specific standards for minimizing erosion and sedimentation shall be incorporated into the Zoning Ordinance. | ***Consistent.*** The project would be required to comply with the County's SWMP and project SWPPP (discussed under Objective 7.1.2) that would address minimizing erosion and sedimentation to be consistent with the General Plan and County Ordinances. |
| **Objective 7.3.2**: Water Quality - Maintenance of and, where possible, improvement of the quality of underground and surface water. | ***Consistent.*** The project would be required to comply with the County's SWMP and project SWPPP (discussed under Objective 7.1.2) that would address minimizing erosion and sedimentation to be consistent with the General Plan and County Ordinances for project construction and operation. |
| **Policy 7.3.2.2**: Projects requiring a grading permit shall have an erosion control program approved, where necessary. | ***Consistent.*** The project would be required to comply with the County's SWMP and project SWPPP (discussed under Objective 7.1.2) that would address minimizing erosion and sedimentation to be consistent with the General Plan and County Ordinances. |
| **Objective 7.3.3:** Wetlands - Protection of natural and man-made wetlands, vernal pools, wet meadows, and riparian areas from impacts related to development for their importance to wildlife habitat, water purification, scenic values, and unique and sensitive plant life. | ***Consistent.*** With the exception of proposed restoration of the existing on-site ponds, the project design retains the on-site drainage features within proposed open space lots. As discussed in Section 3.4, "Biological Resources," Section 3.4.3, "Environmental Impacts and Mitigation Measures," implementation of Mitigation Measures 3.4-3a and 3.4-3b would reduce significant impacts on sensitive natural communities and riparian habitat to a less-than-significant level by requiring compensation for permanent loss of these habitats such that there is no net loss, potentially including a Streambed Alteration Agreement with CDFW. Additionally, implementation of Mitigation Measure 3.4-4 would reduce significant impacts on state and federally protected wetlands to a less-than-significant level by requiring permitting and compensation for unavoidable impacts on state or federally protected wetlands such that there is no net loss of these resources. |
| **Policy 7.3.3.1:** For projects that would result in the discharge of material to or that may affect the function and value of river, stream, lake, pond, or wetland features, the application shall include a delineation of all such features. For wetlands, the delineation shall be conducted using the US Army Corps of Engineers (USACE) Wetland Delineation Manual. | ***Consistent.*** The project would be required to comply with the Mitigation Measures 3.4-3a, 3.4-3b, and 3.4-4 (discussed above under Objective 7.3.3) that would address impacts on protected wetlands to be consistent with the General Plan and County standards. |
| **Policy 7.3.3.5:** Rivers, streams, lakes and ponds, and wetlands shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site while disturbance to the resource is avoided or minimized and fragmentation is limited. | ***Consistent.*** With the exception of proposed restoration of the existing on-site ponds, the project design retains the on-site drainage features within proposed open space lots. The project would be required to comply with Mitigation Measures 3.4-3a, 3.4-3b, and 3.4-4 (discussed above under Objective 7.3.3) that would address impacts on protected wetlands to be consistent with the General Plan and County standards. |
| **Objective 7.3.4:** Drainage - Protection and utilization of natural drainage patterns | ***Consistent.*** With the exception of proposed restoration of the existing on-site ponds, the project design retains the on-site drainage features within proposed open space lots. The project would be required to comply with Mitigation Measures 3.4-3a, 3.4-3b, and 3.4-4 (discussed above) that would address impacts on protected wetlands to be consistent with the General Plan and County standards. |
| **Policy 7.3.4.1:** Natural watercourses shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site without disturbance | ***Consistent.*** With the exception of proposed restoration of the existing on-site ponds, the project design retains the on-site drainage features within proposed open space lots. The project would be required to comply with the Mitigation Measures 3.4-3a, 3.4-3b, and 3.4-4 (discussed above) that |

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| | would address impacts on protected wetlands to be consistent with the General Plan and County Ordinances. |
| **Policy 7.3.4.2:** Modification of natural stream beds and flow shall be regulated to ensure that adequate mitigation measures are utilized. | ***Consistent.*** The project would be required to comply with the Mitigation Measures 3.4-3a, 3.4-3b, and 3.4-4 (discussed above) that would address impacts on protected wetlands to be consistent with the General Plan and County Ordinances. |
| **Objective 7.4.1:** Pine Hill Rare Plant Species - The County shall protect Pine Hill rare plant species and their habitats consistent with Federal and State laws. | ***Consistent.*** As discussed in Section 3.4, "Biological Resources," Section 3.4.3, "Environmental Impacts and Mitigation Measures," implementation of Mitigation Measure 3.4-1 would reduce the significant impact on special-status plants to a less-than-significant level by requiring protocol-level surveys for special-status plants and implementation of avoidance measures and compensation for impacts on special-status plants if they are present on the main project site and off-site improvement areas. Application of this mitigation measure to the project would be consistent with General Plan Objective 7.4.1 and Policy 7.4.2.8. |
| **Policy 7.4.1.1:** The County shall continue to provide for the permanent protection of the eight sensitive plant species known as the Pine Hill endemics and their habitat through the establishment and management of ecological preserves consistent with County Code Chapter 130.71 and the USFWS Gabbro Soil Plants for the Central Sierra Nevada Foothills Recovery Plan (USFWS 2002). | ***Consistent.*** The project is located outside of the ecological preserves. |
| **Objective 7.4.2:** Identify and Protect Resources - Identification and protection, where feasible, of critical fish and wildlife habitat including deer winter, summer, and fawning ranges; deer migration routes; stream and river riparian habitat; lake shore habitat; fish spawning areas; wetlands; wildlife corridors; and diverse wildlife habitat. | ***Consistent.*** Section 3.4, "Biological Resources, Section 3.4.3, "Environmental Impacts and Mitigation Measures," identifies residential development surrounding the project site makes it unlikely that the project site functions as a critical habitat linkage for wildlife. |
| **Policy 7.4.2.8:** Conserve contiguous blocks of important habitat to offset the effects of increased habitat loss and fragmentation elsewhere in the County through a Biological Resource Mitigation Program (Program). The Program will result in the conservation of:<br>1. Habitats that support special status species;<br>2. Aquatic environments including streams, rivers, and lakes;<br>3. Wetland and riparian habitat;<br>4. Important habitat for migratory deer herds; and<br>5. Large expanses of native vegetation. (see full text in Section 3.4.1, "Regulatory Setting.") | ***Consistent.*** Implementation of Mitigation Measure 3.4-2a through 3.4-2j would reduce the potential impact on all endangered or threatened species that may occur in the project area to a less-than significant level through protocol level survey during specific breeding times based on species life cycle and seasonal habits. These species are California red-legged frog, foothill yellow-legged frog, western pond turtle, burrowing owl, special-status birds, raptors, and other native nesting birds, Crotch's bumble bee, monarch butterflies, American badger, pallid bat, Townsend's big-eared bat, and western red bat. The reader is referred to Section 3.4.3, "Environmental Impacts and Mitigation Measures" for the mitigation language to comply with federal, states, and general plan policies. Implementation of Mitigation Measures 3.4-3a and 3.4-3b would reduce significant impacts on sensitive natural communities and riparian habitat to a less-than-significant level by requiring compensation for permanent loss of these habitats such that there is no net loss, potentially including a Streambed Alteration Agreement with CDFW. Application of these mitigation measures to the project would be consistent with General Plan Objective 7.3.3 and associated Policy 7.3.3.5, Objective 7.3.4 and associated Policies 7.3.4.1 and 7.3.4.2, and Objective 7.4.2 and associated Policy 7.4.2.8. Additionally, implementation of Mitigation Measure 3.4-4 would reduce significant impacts on state and federally protected wetlands to a less-than-significant level by requiring permitting and compensation for unavoidable impacts on state or federally protected wetlands such that there is no net loss of these resources. Application of this mitigation measure to the project would be consistent |

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| | with General Plan Objective 7.3.3 and associated Policies 7.3.3.1 and 7.3.3.5, Objective 7.3.4 and associated Policies 7.3.4.1 and 7.3.4.2, and Objective 7.4.2 and associated Policy 7.4.2.8. |
| **Policy 7.4.4.4:** For all new development projects or actions that result in impacts to oak woodlands and/or individual native oak trees, including Heritage Trees, the County shall require mitigation as outlined in the El Dorado County Oak Resources Management Plan (ORMP). The ORMP functions as the oak resources component of the County's biological resources mitigation program, identified in Policy 7.4.2.8. | ***Consistent.*** The project would be required to comply with the County's ORMP and Biological Resource Policy Updates (discussed above) that would address conservation of biological resources and be consistent with the General Plan and County Ordinances. |
| **Policy 7.5.1.3:** Cultural resource studies (historic, prehistoric, and paleontological resources) shall be conducted prior to approval of discretionary projects. Studies may include, but are not limited to, record searches through the North Central Information Center at California State University, Sacramento, the Museum of Paleontology, University of California, Berkeley, field surveys, subsurface testing, and/or salvage excavations. The avoidance and protection of sites shall be encouraged. | ***Consistent.*** Section 3.3, "Archaeological and Historical Resources," identifies that the project was evaluated in the *Cultural Resources Study of the Generations at Green Valley Project,* as well as subsequent field studies of proposed off-site infrastructure improvements. Paleontological resources are addressed in mitigated in Section Geology, Soils, and Paleontological Resources, Section 3.6.3, "Environmental Impacts and Mitigation Measures. "The project would implement MM 3.3-1a through 3.3-1c and 3.6-5a and 3.6-5b that would address resource protection consistent with the General Plan. |
| **Policy 7.5.1.6:** The County shall treat any significant cultural resources (i.e., those determined California Register of Historical Resources/National Register of Historic Places eligible and unique paleontological resources), documented as a result of a conformity review for ministerial development, in accordance with CEQA standards. | ***Consistent.*** See response to Policy 7.5.1.3. |
| **Objective 7.5.2:** Visual Integrity - Maintenance of the visual integrity of historic resources. | ***Consistent.*** See response to Policy 7.5.1.3. |
| **Policy 7.5.2.4:** The County shall prohibit the modification of all National Register of Historic Places (NRHP)/California Register of Historical Resources (CRHR) listed properties that would alter their integrity, historic setting, and appearance to a degree that would preclude their continued listing on these registers. If avoidance of such modifications on privately owned listed properties is deemed infeasible, mitigation measures commensurate with NRHP/CRHR standards shall be formulated in cooperation with the property owner. | ***Consistent.*** See response to Policy 7.5.1.3. |
| **Objective 9.1.1:** Park Acquisition and Development. The County shall assume primary responsibility for the acquisition and development of regional parks and assist in the acquisition and development of neighborhood and community parks to serve County residents and visitors. | ***Consistent.*** The project proposes the dedication of a 4-acre park site to the El Dorado Hills CSD and would pay in-lieu fees to cover the 0.385 remaining acres for the project to remain in compliance with local regulations. |
| **Policy 9.1.1.1:** The County shall assist in the development of regional, community, and neighborhood parks, ensure a diverse range of recreational opportunities at a regional, community, and neighborhood level, and provide park design guidelines and development standards for park development. The following national standards shall be used as guidelines [see Table 3.13-2] for the acquisition and development of park facilities. The parkland dedication/in-lieu fees shall be directed towards the purchase and funding of neighborhood and community parks. | ***Consistent.*** See response to Objective 9.1.1. |

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| **Objective 9.2.2:** Quimby Act. Land dedicated to the County under the Quimby Act and Quimby in-lieu fees shall continue to be used primarily to meet neighborhood park needs but may assist in meeting the community park standards as well. | ***Consistent.*** See response to Objective 9.1.1. |
| **Policy 9.2.2.2:** New development projects creating community or neighborhood parks shall provide mechanisms (e.g., homeowners associations, or benefit assessment districts) for the ongoing development, operation, and maintenance needs of these facilities if annexation to an existing parks and recreation service district/provider is not possible. | ***Consistent.*** See response to Objective 9.1.1. The project's HOA would maintain the proposed clubhouse site. |
| **Policy HO-1.2**: To ensure that projected housing needs can be accommodated, the County shall maintain an adequate supply of suitable sites that are properly located based on environmental constraints, community facilities, and adequate public services. | ***Consistent.*** As discussed in Section 3.12, "Population and Housing," Section 3.12.3, "Environmental Impacts and Mitigation Measures," The project would comply with the County's General Plan policy, HO-1.2, by providing an adequate number of housing units for the anticipated population growth of the county. |
| **Policy HO-1.5**: The County shall direct higher density residential development to Community Regions and Rural Centers. | ***Consistent.*** As discussed in Section 3.12, "Population and Housing," Section 3.12.3, "Environmental Impacts and Mitigation Measures," The project would comply with the County's General Plan policy, HO-1.5, requesting a denser amount of housing than is currently allowed for in the General Plan Zoning Code for the project site in order to contribute to the number of housing units for the anticipated population growth of the county. |
| **Policy TC-1p:** The County shall encourage street designs for interior streets within new subdivisions that minimize the intrusion of through traffic on pedestrians and residential uses while providing efficient connections between neighborhoods and communities. | ***Consistent.*** As discussed in Section 3.14, "Transportation," Section 3.14.3, " Environmental Impacts and Mitigation Measures," the proposed internal roadway design would enhance pedestrian access to and through the project site. |
| **Policy TC-9a**: Incorporate circulation concepts that accommodate all users in new developments as appropriate. | ***Consistent.*** The project includes trails and street designs that accommodate all users and provide safe connections for pedestrians' accessibility parks and recreation services consistent with the General Plan. |
| **Policy TC-5a**: Sidewalks and curbs shall be required throughout residential subdivisions, including land divisions created through the parcel map process, where any residential lot or parcel size is 10,000 square feet or less. | ***Consistent.*** As discussed in Section 3.14, "Transportation," Section 3.14.3, "Environmental Impacts and Mitigation Measures," the project would include sidewalks along project streets. |
| **Policy TC-5c:** Roads adjacent to schools or parks shall have curbs and sidewalks. | ***Consistent.*** See response to Policy TC-9a. |
| **Policy TC-4b:** The County shall construct and maintain bikeways in a manner that minimizes conflicts between bicyclists and motorists. | ***Consistent.*** As discussed in Section 3.14, "Transportation," Section 3.14.3, "Environmental Impacts and Mitigation Measures," the project would minimize the opportunity for conflicts between vehicles and alternative modes of transportation through design. All intersections and driveways along existing and proposed roadways would be required to provide adequate sight distance in accordance with Section 3(B) of the County DISM (El Dorado County 1990: 23). |
| **El Dorado County Ordinances** | |
| **Chapter 130.34.020:** Outdoor lighting Ordinance. | ***Consistent.*** As discussed in Section 3.1, "Aesthetics," Section 3.1.3, "Environmental Impacts and Mitigation Measures," features to reduce excess nighttime light and glare, such as the use of directional shielding and automatic shutoff or motion sensors, would be incorporated into the project design. |

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| **Chapter 110.14:** Grading, Erosion, and Sediment Control Ordinance | ***Consistent.*** As discussed in Section 3.6, "Geology, Soils, and Paleontological Resources, Section 3.6.3, "Environmental Impacts and Mitigation Measures," the project would be required to comply with the County Code of Ordinances Chapter 110.14, Grading, Erosion, and Sediment Control Ordinance, which requires grading and drainage plans to be developed for major development projects, as well as compliance with Chapter 4 of the County Land Development Manual, which sets forth standards and procedures for grading activities in the county. |
| **Chapter 110.32:** On-Site Wastewater Treatment Systems | ***Consistent.*** As discussed in Section 3.6, "Geology, Soils, and Paleontological Resources," Section 3.6.3, "Environmental Impacts and Mitigation Measures," the project would be required to comply with Chapter 110.32 in the County Code of Ordinances and OWTS Manual, which would ensure that construction and operation of the project would not have a significant adverse wastewater disposal or sewer system impact on existing conditions. The project has addressed compliance in part with the preparation of the Septic Feasibility Study. |
| **Chapter 120.12**: Conditions and Requirements | ***Consistent.*** As discussed in Section 3.13, "Public Services and Recreation," Section 3.13.3, "Environmental Impacts and Mitigation Measures," Section 120.12.090 establishes park dedication requirements for new development projects. When a subdivision proposes or creates lots, the Board of Supervisors may require the dedication of land and/or a payment of fees in lieu of park and recreation development as a condition of approval of the tentative subdivision map if the dedicated park land would conform with the goals, objectives, and standards contained in the recreation element of the general plan and any applicable specific plans and the dedicated land would serve park and recreation facilities for the proposed project, in the case of this project the ratio would be required to be 5.0 acres of parks and recreation land per 1,000 residents, as stated in General Plan Policy 9.1.1.1. The project would build a 4.0 acre community park and make up for the additional 0.385 required acres through in-lieu fees. |
| **Chapter 12.08.080**: Roach Encroachments | ***Consistent.*** The project will obtain encroachment permits from El Dorado County before any work begins within El Dorado County right-of-way. |
| **Chapter 130.37.50**: Acoustic Analysis Required | ***Consistent.*** An acoustic analysis was prepared for the project as identified in Section 3.11, "Noise and Vibration." |
| **El Dorado LAFCO Policies** | |
| **Policy 3.2.16:** When evaluating environmental impacts discovered during the Initial Study process, LAFCO will identify such impacts as potentially significant and adverse if:<br>▶ Build-out of the proposed project may cause service levels to decline below established standards, costs of service provision to rise substantially to the detriment of service levels, or cause those currently receiving service to receive reduced or inadequate services especially when such change may cause adverse health and safety or other physical impacts;<br>▶ Build-out of the proposed project may cause the infrastructure capacity of a service provider to exceed planned and safe limits especially when such change may cause adverse health and safety or other physical impacts;<br>▶ The proposed project includes or plans for infrastructure capacity, especially water and sewer lines, that exceed the needs of the proposed project and may be used to serve | ***Consistent.*** The project would maintain El Dorado County General Plan level of service standards for public services and utilities. The project includes plans for annexation to the EID service area as well as water supply, sewer, and electrical improvements that would support the project and allow for surrounding existing developments to maintain their current level of service for water, sewer, and electrical services, see Section 3.15, "Utilities and Service Systems," 3.15.3, "Utilities and Service Systems." Public services, such as fire protection services and park and recreation facilities would also be able to serve the project as detailed in Section 3.13, "Public Services and Recreation," Section 3.13.3, "Environmental Impacts and Mitigation Measures." The project is within the EDHCSD Sphere of Influence. The project is not on important agriculture land or open space land that is open to the public. The project plan includes nine open space lots that would preserve 57.58 acres of oak trees, woodland areas, and wetland features. The project is surrounded by residential projects on its western and southern boundaries, and its larger lot properties in the project design are on the exterior of the project site to soften the transition to the more rural |

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| areas not planned for development, especially those containing prime agricultural land, mineral, sensitive plant and wildlife or other important resources (*note – this circumstance does not occur with this project*);<br>▶ The proposed plan could cause health and safety or other physical impacts because a service provider is incapable of providing service, the proposal has an illogical boundary, or elements needed to provide service (water supply, treatment facilities, equipment, energy) are not available, or stressed beyond capacity.<br>▶ The proposed project is substantially inconsistent with applicable Sphere of Influence Plans, long range and area service plans, phased land use plans of any city or county, or resource conservation plans of the state or federal government.<br>▶ In the case of Sphere of Influence and area of service plans, the Environmental Coordinator reviews the appropriate plans and determines whether the level of significance warrants additional review. In the case of public agency land use or resource plans, the affected agency shall provide specific information regarding the nature and substance of the project's potential impacts upon its plans or programs.<br>▶ The proposed project may induce substantial growth on important agricultural and open space lands because it would:<br>▪ Permit the extension of, or require, infrastructure such as flood control levees or water diversions, electrical, water or sewer lines, especially trunk lines, roadways or other public facilities that would permit new development in a substantial area currently constrained from development;<br>▪ Be adversely and substantially inconsistent with the agricultural, open space, resource conservation or preservation, growth management, trip reduction, air quality improvement or other plans, policies or Ordinances of the General, Community, Specific or other Plan of the land use jurisdiction responsible for the project site or vicinity.<br>▪ Cause significant adverse cumulative impacts when considered in conjunction with other recent, present and reasonably foreseeable projects;<br>▪ Result in substantial noncontiguous development which, in turn, results in adverse physical impacts;<br>▪ Have no need for service and the proposed project adversely affects important public resources or the public health and safety;<br>▪ Adversely impact animal or plant species either listed as, or determined to be, endangered, rare, or threatened as provided in §15380; or | lands to the north and east of the project site. There is the potential for the project to impact special status species, however with the mitigation measures listed in Section 3.4, "Biological Resources," these impacts would be less than significant. |

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| ▪ Be identified as potentially significant when completing the Initial Study checklist adopted as Exhibit A of LAFCO's CEQA procedures. | |
| **Policy 3.3.2.2:** If service cannot be provided without expanding service capacity or constructing infrastructure (other than at parcel connections to service), then the following information shall be provided:<br>▶ A description of any required facility or infrastructure expansions or other necessary capital improvements;<br>▶ The likely schedule for completion of the expanded capacity project, the viability of the needed project, and the relation of the subject project to the overall project and project time line;<br>▶ A list of required administrative and legislated processes, such as CEQA review or State Water Resources Board allocation permits, including assessment of likelihood of approval of any permits and existence of pending or threatened legal or administrative challenges if known;<br>▶ The planned total additional capacity;<br>▶ The size and location of needed capital improvements;<br>▶ The proposed project cost, financing plan and financing mechanisms including a description of the persons or properties who will be expected to bear project costs; and<br>▶ Any proposed alternative projects if the preferred project cannot be completed (include information in letters "a" through "f" for each proposed alternative). | ***Consistent.*** The project has provided specific descriptions of required utility, facility, and infrastructure plans that would be needed to provide services to the project area as identified in Section 3.13, Public Services and Recreation," and Section 3.15, "Utilities and Service Systems." Off-site water and wastewater improvements would be sized to accommodate the project. |
| **Policy 3.4.1:** Consistency with General and Specific Plans. For the purposes of this policy, a project is consistent if the type and level of services to be provided are consistent with and appropriate to the applicable General or Specific Plan land use designations and document text, and the applicable General or Specific Plan is legally adequate and internally consistent. The Commission will not approve projects that are inconsistent with the applicable General or Specific Plan unless the following circumstances are shown to exist:<br>The site is fully developed and located in an existing developed area where district or city facilities are present and found by LAFCO to be sufficient for service and where the Commission determines that the change of organization or reorganization will not induce growth in the area.<br>The site is fully developed and located in an existing developed area where LAFCO finds that the public interests of health, safety, and welfare would best be served, or that clear and present health or safety hazards could be mitigated, by the proposal.<br>The site is located in an undeveloped area where disapproval would cause a loss of service to existing service users. | ***Consistent.*** While the project is proposing to amend its current General Plan land use designations to allow for more dense residential development, the project is located within the El Dorado Hills Community Region that is designated for urban and suburban development and associated public service and utility provision. Impacts on fire protection services and parks and recreation facilities was discussed in Section 3.13, "Public Services and Recreation," and would be consistent with LAFCO capacity policies through facility improvements and development fees. Impacts of the project on the wastewater system is evaluated in Section 3.15, "Utilities and Service Systems," and the project includes plans for capital improvement projects to the EID wastewater system off-site from the project area to service the project and not exceed the capacity of the existing public wastewater service. Additionally, Section 3.10, "Land Use and Planning, and Agriculture and Forestry Resources" details consistency with the El Dorado County General Plan and El Dorado County Code of Ordinances. |
| **Policy 3.9.3:** Lands to be annexed which are within an adopted Sphere of Influence shall be physically contiguous to the boundaries of the annexing agency except under one of the following circumstances (§56119): | ***Consistent.*** As described in Section 3.13, "Public Service and Recreation," and Section 3.15, "Utility and Service Systems," the project area is within sphere of influences for the El Dorado Hills Fire Department, El Dorado Hills Community Services District, and EID. |

| Plan/ Policy/Regulation | Project Consistency |
|---|---|
| ▶ Existing developed areas where LAFCO determines that interests of public health, safety, and welfare would best be served by the extension of the service, or which represent clear or present health or safety hazards that could be mitigated by the proposal and city or district facilities are present and sufficient for service.<br>▶ Existing developed areas where city or district facilities are present and sufficient for service, and where the Commission determines that the annexation will not induce growth. | |
| **Policy 3.9.7:** The resulting boundary configuration shall not produce areas that are difficult to serve (§56668, §56001). | ***Consistent.*** As described in Section 3.13, "Public Services and Recreation," and Section 3.14, "Transportation," EA roads and access points from Green Valley Road would allow for adequate service to the project site. Additionally, the project site is in a contiguous boundary from agencies that would require annexation, and would not create an area that is difficult to serve. |
| **Policy 6.1.7:** Prior to annexation to a city or special district, the petitioners shall demonstrate that the need for governmental services exists, the annexing agency is capable of providing service, that a plan for service exists, and that the annexation is the best alternative to provide service (§56700, §56668) | ***Consistent.*** The project would be required to comply with level of service standards and agency requirements to gain annexation (discussed above), which would be consistent with the LAFCO policies. Project-proposed residential development densities would require public services and utility service. |

# Appendix H

Noise Modeling Data

## Gnerations at Green Valley

| Location | Distance to Nearest Receptor in feet | Combined Predicted Noise Level ($L_{eq}$ dBA) |
|---|---|---|
| Residential Threshold | 31 | 90.0 |
| Nearest Resiential to Center of Site | 600 | 64.2 |

| Equipment | Reference Emission Noise Levels ($L_{max}$) at 50 feet[1] | Usage Factor[1] |
|---|---|---|
| **Grader** | 85 | 0.4 |
| **Excavator** | 85 | 0.4 |
| **Dozer** | 85 | 0.4 |

| | |
|---|---|
| **Ground Type** | hard |
| **Source Height** | 8 |
| **Receiver Height** | 5 |
| **Ground Factor[2]** | 0.00 |

| Predicted Noise Level [3] | $L_{eq}$ dBA at 50 feet[3] |
|---|---|
| **Grader** | 81.0 |
| **Excavator** | 81.0 |
| **Dozer** | 81.0 |

| Combined Predicted Noise Level ($L_{eq}$ dBA at 50 feet) |
|---|
| 85.8 |

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[2] Based on Figure 6-5 from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 6-23).

[3] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 12-3).

$L_{eq}(equip) = E.L.+10*\log(U.F.) - 20*\log(D/50) - 10*G*\log(D/50)$

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects (FTA 2006: pg 6-23); and

D = Distance from source to receiver.

# Distance Propagation Calculations for Stationary Sources of Ground Vibration

**KEY:** Orange cells are for input.

Grey cells are intermediate calculations performed by the model.

Green cells are data to present in a written analysis (output).

## STEP 1: Determine units in which to perform calculation.

— If vibration decibels (VdB), then use Table A and proceed to Steps 2A and 3A.

— If peak particle velocity (PPV), then use Table B and proceed to Steps 2B and 3B.

## STEP 2A: Identify the vibration source and enter the reference vibration level (VdB) and distance.

## STEP 3A: Select the distance to the receiver.

**Table A. Propagation of vibration decibels (VdB) with distance**

| Noise Source/ID | Reference Noise Level | | | Attenuated Noise Level at Receptor | | |
|---|---|---|---|---|---|---|
| | vibration level (VdB) | @ | distance (ft) | vibration level (VdB) | @ | distance (ft) |
| Roller | 94 | @ | 25 | 80.0 | @ | 73 |
| large bull dozer | 87.0 | @ | 25 | 80.2 | @ | 42 |

The Lv metric (VdB) is used to assess the likelihood for vibration to result in human annoyance.

## STEP 2B: Identify the vibration source and enter the reference peak particle velocity (PPV) and distance.

## STEP 3B: Select the distance to the receiver.

**Table B. Propagation of peak particle velocity (PPV) with distance**

| Noise Source/ID | Reference Noise Level | | | Attenuated Noise Level at Receptor | | |
|---|---|---|---|---|---|---|
| | vibration level (PPV) | @ | distance (ft) | vibration level (PPV) | @ | distance (ft) |
| Roller | 0.210 | @ | 25 | 0.198 | @ | 26 |
| large bull dozer | 0.089 | @ | 25 | 0.191 | @ | 15 |

The PPV metric (in/sec) is used for assessing the likelihood for the potential of structural damage.

Notes:

Computation of propagated vibration levels is based on the equations presented on pg. 185 of FTA 2018. Estimates of attenuated vibration levels do not account for reductions from intervening underground barriers or other underground structures of any type, or changes in soil type.

Federal Transit Association (FTA). 2018 (September). Transit Noise and Vibration Impact Assessment Manual. FTA Report
https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-

## Attenuation Calculations for Stationary Noise Sources

**KEY:** Orange cells are for input.
Grey cells are intermediate calculations performed by the model.
Green cells are data to present in a written analysis (output).

**STEP 1: Identify the noise source and enter the reference noise level (dBA and distance).**

**STEP 2: Select the ground type (hard or soft), and enter the source and receiver heights.**

**STEP 3: Select the distance to the receiver.**

| Noise Source/ID | Reference Noise Level | | | Attenuation Characteristics | | | | Attenuated Noise Level at Receptor | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | noise level (dBA) | @ | distance (ft) | Ground Type (soft/hard) | Source Height (ft) | Receiver Height (ft) | Ground Factor | noise level (dBA) | @ | distance (ft) |
| HVAC heat pump | 69 | @ | 3 | hard | 8 | 5 | 0.00 | 55 | @ | 15 |
| HVAC fan coils | 60 | @ | 3 | hard | 8 | 5 | 0.00 | 46 | @ | 15 |
| Normal voice Lot A, Leq | 60.0 | @ | 3 | hard | 8 | 5 | 0.00 | 20 | | 285 |
| Raised Voice Lot A, Lmax | 66.0 | @ | 3 | hard | 8 | 5 | 0.00 | 26 | | 285 |
| Normal voice Lot C, Leq | 60.0 | @ | 3 | hard | 8 | 5 | 0.00 | 25 | | 165 |
| Raised Voice Lot C, Lmax | 66.0 | @ | 3 | hard | 8 | 5 | 0.00 | 31 | | 165 |
| Normal voice Lot D, Leq | 60.0 | @ | 3 | hard | 8 | 5 | 0.00 | 36 | | 50 |
| Raised Voice Lot D, Lmax | 66.0 | @ | 3 | hard | 8 | 5 | 0.00 | 42 | | 50 |
| Normal voice Lot F, Leq | 60.0 | @ | 3 | hard | 8 | 5 | 0.00 | 26 | | 150 |
| Raised Voice Lot F, Lmax | 66.0 | @ | 3 | hard | 8 | 5 | 0.00 | 32 | | 150 |
| Normal voice Lot F, Leq | 60.0 | @ | 3 | hard | 8 | 5 | 0.00 | 24 | | 180 |
| Raised Voice Lot F, Lmax | 66.0 | @ | 3 | hard | 8 | 5 | 0.00 | 30 | | 180 |
| Normal voice Lot I, Leq | 60.0 | @ | 3 | hard | 8 | 5 | 0.00 | 27 | | 130 |
| Raised Voice Lot I, Lmax | 66.0 | @ | 3 | hard | 8 | 5 | 0.00 | 33 | | 130 |
| Normal voice Clubhouse, Leq | 60.0 | @ | 3 | hard | 8 | 5 | 0.00 | 11 | | 890 |
| Raised Voice Clubhouse, Lmax | 66.0 | @ | 3 | hard | 8 | 5 | 0.00 | 17 | | 890 |
| Normal voice Clubhouse, Leq | 60.0 | @ | 3 | hard | 8 | 5 | 0.00 | 13 | | 700 |
| Raised Voice Clubhouse, Lmax | 66.0 | @ | 3 | hard | 8 | 5 | 0.00 | 19 | | 700 |
| Pickleball Clubhouse, Leq | 66.9 | @ | 10 | hard | 8 | 5 | 0.00 | 28 | | 890 |
| Pickleball Clubhouse, Lmax | 76.9 | @ | 10 | hard | 8 | 5 | 0.00 | 38 | | 890 |
| Pickleball Clubhouse, Leq | 66.9 | @ | 10 | hard | 8 | 5 | 0.00 | 30 | | 700 |
| Pickleball Clubhouse, Lmax | 76.9 | @ | 10 | hard | 8 | 5 | 0.00 | 40 | | 700 |
| Mechanized Trimmer, Leq | 81.0 | @ | 3 | hard | 8 | 5 | 0.00 | 55 | | 57 |
| Leaf blower, Leq | 77.0 | @ | 3 | hard | 8 | 5 | 0.00 | 55 | | 36 |

Notes:

Estimates of attenuated noise levels do not account for reductions from intervening barriers, including walls, trees, vegetation, or structures of any type.

Computation of the attenuated noise level is based on the equation presented on pg. 176 and 177 of FTA 2018.

Computation of the ground factor is based on the equation presentd in Table 4-26 on pg. 86 of FTA 2018, where the distance of the reference noise leve can be adjusted and the usage factor is not applied (i.e., the usage factor is equal to 1).

Sources:

Federal Transit Association (FTA). 2018 (September). Transit Noise and Vibration Impact Assessment. Washington, D.C. Available: <http://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf>Accessed: March 5, 2020.

## Traffic Noise Spreadsheet Calculator

**Project:**

**Noise Level Descriptor:** Ldn
**Site Conditions:** Hard
**Traffic Input:** ADT
**Traffic K-Factor:**

| | | Segment Description and Location | | Input | | | | | | | | | | Output | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Distance to Directional Centerline, (feet)[4] | | Traffic Distribution Characteristics | | | | | | | Distance to Contour, (feet)[3] | | | |
| Number | Name | From | To | ADT | Speed (mph) | Near | Far | % Auto | % Medium | % Heavy | % Day | % Eve | % Night | Ldn, (dBA)[5,6,7] | 75 dBA | 70 dBA | 65 dBA | 60 dBA |
| | **Existing Conditions** | | | | | | | | | | | | | | | | | |
| 1 | El Dorado Hills Boulevard | Francisco Drive | Green Valley Road | 5,450 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 64.2 | 4 | 13 | 42 | 133 |
| 2 | El Dorado Hills Boulevard | Harvard Way | Francisco Parkway | 15,650 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 68.8 | 12 | 38 | 120 | 381 |
| 3 | El Dorado Hills Boulevard | Wilson Boulevard | Harvard Way | 20,590 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.0 | 16 | 50 | 158 | 501 |
| 4 | El Dorado Hills Boulevard | Serrano Parkway | Wilson Boulevard | 20,360 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.0 | 16 | 50 | 157 | 495 |
| 5 | El Dorado Hills Boulevard | Saratoga Way | Serrano Parkway | 22,090 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.3 | 17 | 54 | 170 | 537 |
| 6 | El Dorado Hills Boulevard | South end of Saratoga Way/US 50 WB Ramp | North end of Sara | 23,220 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.5 | 18 | 56 | 179 | 565 |
| 7 | Latrobe Road | US 50 EB Ramp | US 50 WB Ramp | 31,400 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 71.8 | 24 | 76 | 242 | 764 |
| 8 | Silva Valley Parkway | Tong Road | Serrano Parkway | 15,740 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 68.8 | 12 | 38 | 121 | 383 |
| 9 | Silva Valley Parkway | Serrano Parkway | Harvard Way | 12,080 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 67.7 | 9 | 29 | 93 | 294 |
| 10 | Silva Valley Parkway | HArvard Way | Appian Way | 7,530 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 65.6 | 6 | 18 | 58 | 183 |
| 11 | Silva Valley Parkway | Appian Way | Green Valley Road | 6,370 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 64.9 | 5 | 15 | 49 | 155 |
| 12 | Green Valley Road | Sophia Parkway | Francisco Drive | 22,840 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 73.0 | 32 | 101 | 318 | 1006 |
| 13 | Green Valley Road | Francisco Drive | El Dorado Hills Boulevard | 15,100 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 71.2 | 21 | 66 | 210 | 665 |
| 14 | Green Valley Road | El Dorado Hills Boulevard | Silva Valley Parkway | 15,110 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 71.2 | 21 | 67 | 210 | 665 |
| 15 | Green Valley Road | Silva Valley Parkway | Loch Way | 10,960 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 69.8 | 15 | 48 | 153 | 483 |
| 16 | Green Valley Road | Loch Way | Malcolm Dixon Cutoff | 10,700 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 69.7 | 15 | 47 | 149 | 471 |
| 17 | Green Valley Road | Malcolm Dixon Cutoff | Malcolm Dixon Road | 10,500 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 69.7 | 15 | 46 | 146 | 462 |
| 18 | Green Valley Road | Project Driveway 2 | Deer Valley Road | 10,410 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 69.6 | 14 | 46 | 145 | 458 |
| 19 | Green Valley Road | Deer Valley Road | Silver Springs Parkway | 10,800 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 69.8 | 15 | 48 | 150 | 476 |
| 20 | Green Valley Road | Silver Springs Parkway | Bass Lake Road | 11,390 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.0 | 16 | 50 | 159 | 502 |
| 21 | Green Valley Road | Bass Lake Road | Cambridge Road | 12,170 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.3 | 17 | 54 | 169 | 536 |
| 22 | Green Valley Road | Cambridge Road | Cameron Park Drive | 10,030 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 69.5 | 14 | 44 | 140 | 442 |
| 23 | Green Valley Road | Malcolm Dixon Road | Project Driveway 1 | 10,410 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 69.6 | 14 | 46 | 145 | 458 |
| 24 | Green Valley Road | Project Driveway 1 | Project Driveway 2 | 10,410 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 69.6 | 14 | 46 | 145 | 458 |
| 25 | Francisco Drive | Green Valley Road | El Dorado Hills Boulevard | 13,430 | 40 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 66.7 | 7 | 23 | 74 | 233 |
| 26 | Harvard Way | El Dorado Hills Boulevard | Silva Valley Parkway | 14,550 | 35 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 65.5 | 6 | 18 | 56 | 176 |
| 27 | Serrano Parkway | El Dorado Hills Boulevard | Silva Valley Parkway | 9,270 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 66.5 | 7 | 23 | 71 | 226 |

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

## Traffic Noise Spreadsheet Calculator

**Project:**

**Noise Level Descriptor:** Ldn
**Site Conditions:** Hard
**Traffic Input:** ADT
**Traffic K-Factor:**

| | | Segment Description and Location | | Input | | | | | | | | | | Output | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Distance to Directional Centerline, (feet)[4] | | Traffic Distribution Characteristics | | | | | | | Distance to Contour, (feet)[3] | | | |
| Number | Name | From | To | ADT | Speed (mph) | Near | Far | % Auto | % Medium | % Heavy | % Day | % Eve | % Night | Ldn, (dBA)[5,6,7] | 75 dBA | 70 dBA | 65 dBA | 60 dBA |
| **Plus Project** | | | | | | | | | | | | | | | | | | |
| 1 | El Dorado Hills Boulevard | Francisco Drive | Green Valley Road | 5,680 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 64.4 | 4 | 14 | 44 | 138 |
| 2 | El Dorado Hills Boulevard | Harvard Way | Francisco Parkway | 15,870 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 68.9 | 12 | 39 | 122 | 386 |
| 3 | El Dorado Hills Boulevard | Wilson Boulevard | Harvard Way | 20,780 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.0 | 16 | 51 | 160 | 506 |
| 4 | El Dorado Hills Boulevard | Serrano Parkway | Wilson Boulevard | 20,510 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.0 | 16 | 50 | 158 | 499 |
| 5 | El Dorado Hills Boulevard | Saratoga Way | Serrano Parkway | 22,300 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.4 | 17 | 54 | 172 | 543 |
| 6 | El Dorado Hills Boulevard | South end of Saratoga Way/US 50 WB Ramp | North end of Sara | 23,380 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.6 | 18 | 57 | 180 | 569 |
| 7 | Latrobe Road | US 50 EB Ramp | US 50 WB Ramp | 31,540 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 71.9 | 24 | 77 | 243 | 767 |
| 8 | Silva Valley Parkway | Tong Road | Serrano Parkway | 16,020 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 68.9 | 12 | 39 | 123 | 390 |
| 9 | Silva Valley Parkway | Serrano Parkway | Harvard Way | 12,360 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 67.8 | 10 | 30 | 95 | 301 |
| 10 | Silva Valley Parkway | HArvard Way | Appian Way | 7,880 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 65.8 | 6 | 19 | 61 | 192 |
| 11 | Silva Valley Parkway | Appian Way | Green Valley Road | 6,460 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 65.0 | 5 | 16 | 50 | 157 |
| 12 | Green Valley Road | Sophia Parkway | Francisco Drive | 23,720 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 73.2 | 33 | 104 | 330 | 1045 |
| 13 | Green Valley Road | Francisco Drive | El Dorado Hills Boulevard | 16,200 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 71.5 | 23 | 71 | 226 | 713 |
| 14 | Green Valley Road | El Dorado Hills Boulevard | Silva Valley Parkway | 16,530 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 71.6 | 23 | 73 | 230 | 728 |
| 15 | Green Valley Road | Silva Valley Parkway | Loch Way | 12,930 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.6 | 18 | 57 | 180 | 569 |
| 16 | Green Valley Road | Loch Way | Malcolm Dixon Cutoff | 12,720 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.5 | 18 | 56 | 177 | 560 |
| 17 | Green Valley Road | Malcolm Dixon Cutoff | Malcolm Dixon Road | 12,530 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.4 | 17 | 55 | 174 | 552 |
| 18 | Green Valley Road | Project Driveway 2 | Deer Valley Road | 11,130 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 69.9 | 15 | 49 | 155 | 490 |
| 19 | Green Valley Road | Deer Valley Road | Silver Springs Parkway | 11,220 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 69.9 | 16 | 49 | 156 | 494 |
| 20 | Green Valley Road | Silver Springs Parkway | Bass Lake Road | 11,740 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.1 | 16 | 52 | 163 | 517 |
| 21 | Green Valley Road | Bass Lake Road | Cambridge Road | 12,490 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.4 | 17 | 55 | 174 | 550 |
| 22 | Green Valley Road | Cambridge Road | Cameron Park Drive | 10,270 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 69.6 | 14 | 45 | 143 | 452 |
| 23 | Green Valley Road | Malcolm Dixon Road | Project Driveway 1 | 12,440 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.4 | 17 | 55 | 173 | 548 |
| 24 | Green Valley Road | Project Driveway 1 | Project Driveway 2 | 12,190 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.3 | 17 | 54 | 170 | 537 |
| 25 | Francisco Drive | Green Valley Road | El Dorado Hills Boulevard | 14,110 | 40 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 66.9 | 8 | 25 | 78 | 245 |
| 26 | Harvard Way | El Dorado Hills Boulevard | Silva Valley Parkway | 14,610 | 35 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 65.5 | 6 | 18 | 56 | 177 |
| 27 | Serrano Parkway | El Dorado Hills Boulevard | Silva Valley Parkway | 9,270 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 66.5 | 7 | 23 | 71 | 226 |

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

## Traffic Noise Spreadsheet Calculator

**Project:**

**Noise Level Descriptor:** Ldn
**Site Conditions:** Hard
**Traffic Input:** ADT
**Traffic K-Factor:**

| | | Segment Description and Location | | Input | | | | | | | | | | Output | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Distance to Directional Centerline, (feet)[4] | | Traffic Distribution Characteristics | | | | | | | Distance to Contour, (feet)[3] | | | |
| Number | Name | From | To | ADT | Speed (mph) | Near | Far | % Auto | % Medium | % Heavy | % Day | % Eve | % Night | Ldn, (dBA)[5,6,7] | 75 dBA | 70 dBA | 65 dBA | 60 dBA |
| | **Cumulative No Project** | | | | | | | | | | | | | | | | | |
| 1 | El Dorado Hills Boulevard | Francisco Drive | Green Valley Road | 5,780 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 64.5 | 4 | 14 | 44 | 141 |
| 2 | El Dorado Hills Boulevard | Harvard Way | Francisco Parkway | 16,130 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 68.9 | 12 | 39 | 124 | 392 |
| 3 | El Dorado Hills Boulevard | Wilson Boulevard | Harvard Way | 23,030 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.5 | 18 | 56 | 177 | 560 |
| 4 | El Dorado Hills Boulevard | Serrano Parkway | Wilson Boulevard | 21,570 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.2 | 17 | 52 | 166 | 525 |
| 5 | El Dorado Hills Boulevard | Saratoga Way | Serrano Parkway | 26,780 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 71.1 | 21 | 65 | 206 | 652 |
| 6 | El Dorado Hills Boulevard | South end of Saratoga Way/US 50 WB Ramp | North end of Sara | 26,740 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 71.1 | 21 | 65 | 206 | 651 |
| 7 | Latrobe Road | US 50 EB Ramp | US 50 WB Ramp | 37,720 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 72.6 | 29 | 92 | 290 | 918 |
| 8 | Silva Valley Parkway | Tong Road | Serrano Parkway | 18,370 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 69.5 | 14 | 45 | 141 | 447 |
| 9 | Silva Valley Parkway | Serrano Parkway | Harvard Way | 13,850 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 68.3 | 11 | 34 | 107 | 337 |
| 10 | Silva Valley Parkway | HArvard Way | Appian Way | 8,040 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 65.9 | 6 | 20 | 62 | 196 |
| 11 | Silva Valley Parkway | Appian Way | Green Valley Road | 7,130 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 65.4 | 5 | 17 | 55 | 173 |
| 12 | Green Valley Road | Sophia Parkway | Francisco Drive | 27,020 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 73.8 | 38 | 119 | 376 | 1190 |
| 13 | Green Valley Road | Francisco Drive | El Dorado Hills Boulevard | 18,690 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 72.2 | 26 | 82 | 260 | 823 |
| 14 | Green Valley Road | El Dorado Hills Boulevard | Silva Valley Parkway | 17,770 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 71.9 | 25 | 78 | 247 | 783 |
| 15 | Green Valley Road | Silva Valley Parkway | Loch Way | 12,760 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.5 | 18 | 56 | 178 | 562 |
| 16 | Green Valley Road | Loch Way | Malcolm Dixon Cutoff | 12,160 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.3 | 17 | 54 | 169 | 536 |
| 17 | Green Valley Road | Malcolm Dixon Cutoff | Malcolm Dixon Road | 12,090 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.3 | 17 | 53 | 168 | 532 |
| 18 | Green Valley Road | Project Driveway 2 | Deer Valley Road | 11,840 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.2 | 16 | 52 | 165 | 521 |
| 19 | Green Valley Road | Deer Valley Road | Silver Springs Parkway | 12,750 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.5 | 18 | 56 | 178 | 561 |
| 20 | Green Valley Road | Silver Springs Parkway | Bass Lake Road | 11,880 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.2 | 17 | 52 | 165 | 523 |
| 21 | Green Valley Road | Bass Lake Road | Cambridge Road | 13,370 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.7 | 19 | 59 | 186 | 589 |
| 22 | Green Valley Road | Cambridge Road | Cameron Park Drive | 10,870 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 69.8 | 15 | 48 | 151 | 479 |
| 23 | Green Valley Road | Malcolm Dixon Road | Project Driveway 1 | 12,160 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.3 | 17 | 54 | 169 | 536 |
| 24 | Green Valley Road | Project Driveway 1 | Project Driveway 2 | 11,940 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.2 | 17 | 53 | 166 | 526 |
| 25 | Francisco Drive | Green Valley Road | El Dorado Hills Boulevard | 16,850 | 40 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 67.7 | 9 | 29 | 93 | 293 |
| 26 | Harvard Way | El Dorado Hills Boulevard | Silva Valley Parkway | 10,370 | 35 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 64.0 | 4 | 13 | 40 | 125 |
| 27 | Serrano Parkway | El Dorado Hills Boulevard | Silva Valley Parkway | 10,150 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 66.9 | 8 | 25 | 78 | 247 |

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

## Traffic Noise Spreadsheet Calculator

**Project:**

**Noise Level Descriptor:** Ldn
**Site Conditions:** Hard
**Traffic Input:** ADT
**Traffic K-Factor:**

| | | Segment Description and Location | | Input | | | | | | | | | | Output | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Distance to Directional Centerline, (feet)[4] | | Traffic Distribution Characteristics | | | | | | | Distance to Contour, (feet)[3] | | | |
| Number | Name | From | To | ADT | Speed (mph) | Near | Far | % Auto | % Medium | % Heavy | % Day | % Eve | % Night | Ldn, (dBA)[5,6,7] | 75 dBA | 70 dBA | 65 dBA | 60 dBA |
| | **Cumulative Plus Project** | | | | | | | | | | | | | | | | | |
| 1 | El Dorado Hills Boulevard | Francisco Drive | Green Valley Road | 6,010 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 64.7 | 5 | 15 | 46 | 146 |
| 2 | El Dorado Hills Boulevard | Harvard Way | Francisco Parkway | 16,350 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 69.0 | 13 | 40 | 126 | 398 |
| 3 | El Dorado Hills Boulevard | Wilson Boulevard | Harvard Way | 23,220 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.5 | 18 | 56 | 179 | 565 |
| 4 | El Dorado Hills Boulevard | Serrano Parkway | Wilson Boulevard | 21,720 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.2 | 17 | 53 | 167 | 528 |
| 5 | El Dorado Hills Boulevard | Saratoga Way | Serrano Parkway | 26,990 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 71.2 | 21 | 66 | 208 | 657 |
| 6 | El Dorado Hills Boulevard | South end of Saratoga Way/US 50 WB Ramp | North end of Sara | 26,900 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 71.2 | 21 | 65 | 207 | 654 |
| 7 | Latrobe Road | US 50 EB Ramp | US 50 WB Ramp | 37,860 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 72.7 | 29 | 92 | 291 | 921 |
| 8 | Silva Valley Parkway | Tong Road | Serrano Parkway | 18,650 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 69.6 | 14 | 45 | 143 | 454 |
| 9 | Silva Valley Parkway | Serrano Parkway | Harvard Way | 14,130 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 68.4 | 11 | 34 | 109 | 344 |
| 10 | Silva Valley Parkway | HArvard Way | Appian Way | 8,390 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 66.1 | 6 | 20 | 65 | 204 |
| 11 | Silva Valley Parkway | Appian Way | Green Valley Road | 7,520 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 65.6 | 6 | 18 | 58 | 183 |
| 12 | Green Valley Road | Sophia Parkway | Francisco Drive | 28,040 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 73.9 | 39 | 123 | 390 | 1235 |
| 13 | Green Valley Road | Francisco Drive | El Dorado Hills Boulevard | 20,060 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 72.5 | 28 | 88 | 279 | 883 |
| 14 | Green Valley Road | El Dorado Hills Boulevard | Silva Valley Parkway | 20,240 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 72.5 | 28 | 89 | 282 | 891 |
| 15 | Green Valley Road | Silva Valley Parkway | Loch Way | 14,730 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 71.1 | 21 | 65 | 205 | 649 |
| 16 | Green Valley Road | Loch Way | Malcolm Dixon Cutoff | 14,180 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 71.0 | 20 | 62 | 197 | 624 |
| 17 | Green Valley Road | Malcolm Dixon Cutoff | Malcolm Dixon Road | 14,110 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.9 | 20 | 62 | 196 | 621 |
| 18 | Green Valley Road | Project Driveway 2 | Deer Valley Road | 12,560 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.4 | 17 | 55 | 175 | 553 |
| 19 | Green Valley Road | Deer Valley Road | Silver Springs Parkway | 13,330 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.7 | 19 | 59 | 186 | 587 |
| 20 | Green Valley Road | Silver Springs Parkway | Bass Lake Road | 12,230 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.3 | 17 | 54 | 170 | 539 |
| 21 | Green Valley Road | Bass Lake Road | Cambridge Road | 13,690 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.8 | 19 | 60 | 191 | 603 |
| 22 | Green Valley Road | Cambridge Road | Cameron Park Drive | 11,530 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.1 | 16 | 51 | 161 | 508 |
| 23 | Green Valley Road | Malcolm Dixon Road | Project Driveway 1 | 13,420 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.7 | 19 | 59 | 187 | 591 |
| 24 | Green Valley Road | Project Driveway 1 | Project Driveway 2 | 13,720 | 55 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 70.8 | 19 | 60 | 191 | 604 |
| 25 | Francisco Drive | Green Valley Road | El Dorado Hills Boulevard | 17,390 | 40 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 67.8 | 10 | 30 | 96 | 302 |
| 26 | Harvard Way | El Dorado Hills Boulevard | Silva Valley Parkway | 10,520 | 35 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 64.1 | 4 | 13 | 40 | 127 |
| 27 | Serrano Parkway | El Dorado Hills Boulevard | Silva Valley Parkway | 10,150 | 45 | 50 | 50 | 97.0% | 2.0% | 1.0% | 80.0% | 15.0% | 5.0% | 66.9 | 8 | 25 | 78 | 247 |

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

| Citation # | Citations | |
|---|---|---|
| 1 | Caltrans Technical Noise Supplement. 2009 (November). Table (5-11), Pg 5-60. | Caltrans Technical Noise Supplement. 2013 (September). Table (4-2), Pg 4-17. |
| 2 | Caltrans Technical Noise Supplement. 2009 (November). Equation (5-26), Pg 5-60. | Caltrans Technical Noise Supplement. 2013 (September). Equation (4-5), Pg 4-17. |
| 3 | Caltrans Technical Noise Supplement. 2009 (November). Equation (2-16), Pg 2-32. | FHWA 2004 TNM Version 2.5 |
| 4 | Caltrans Technical Noise Supplement. 2009 (November). Equation (5-11), Pg 5-47, 48. | FHWA 2004 TNM Version 2.5 |
| 5 | Caltrans Technical Noise Supplement. 2009 (November). Equation (2-26), Pg 2-55, 56. | Caltrans Technical Noise Supplement. 2013 (September). Equation (2-23), Pg 2-51 |
| 6 | Caltrans Technical Noise Supplement. 2009 (November). Equation (2-27), Pg 2-57. | Caltrans Technical Noise Supplement. 2013 (September). Equation (2-24), Pg 2-53 |
| 7 | Caltrans Technical Noise Supplement. 2009 (November). Pg 2-53. | Caltrans Technical Noise Supplement. 2013 (September). Pg 2-57. |
| 8 | Caltrans Technical Noise Supplement. 2009 (November). Equation (5-7), Pg 5-45. | FHWA 2004 TNM Version 2.5 |
| 9 | Caltrans Technical Noise Supplement. 2009 (November). Equation (5-8), Pg 5-45. | FHWA 2004 TNM Version 2.5 |
| 10 | Caltrans Technical Noise Supplement. 2009 (November). Equation (5-9), Pg 5-45. | FHWA 2004 TNM Version 2.5 |
| 11 | Caltrans Technical Noise Supplement. 2009 (November). Equation (5-13), Pg 5-49. | FHWA 2004 TNM Version 2.5 |
| 12 | Caltrans Technical Noise Supplement. 2009 (November). Equation (5-14), Pg 5-49. | FHWA 2004 TNM Version 2.5 |
| 13 | Federal Highway Administration Traffic Noise Model Technical Manual. Report No. FHWA-PD-96-010. 1998 (January). Equation (16), Pg 67 | |
| 14 | Federal Highway Administration Traffic Noise Model Technical Manual. Report No. FHWA-PD-96-010. 1998 (January). Equation (20), Pg 69 | |
| 15 | Federal Highway Administration Traffic Noise Model Technical Manual. Report No. FHWA-PD-96-010. 1998 (January). Equation (18), Pg 69 | |

References

California Department of Transportation (Caltrans). 2009 (November). Technical Noise Supplement. Available: http://www.dot.ca.gov/hq/env/noise/pub/tens_complete.pdf. Accessed Aug 2017.

## Summary

| | |
|---|---|
| **File Name on Meter** | LxT_Data.178.s |
| **File Name on PC** | LxT_0003285-20240227 074333-LxT_Data.178.ldbin |
| **Serial Number** | 0003285 |
| **Model** | SoundTrack LxT® |
| **Firmware Version** | 2.302 |
| **Location** | |
| **Job Description** | Generations at Green Valley |
| **Note** | ST 1 (short-term 1) |

## Measurement

| | |
|---|---|
| **Description** | |
| **Start** | 2024-02-27 07:43:33 |
| **Stop** | 2024-02-27 08:01:19 |
| **Duration** | 00:17:45.9 |
| **Run Time** | 00:17:45.9 |
| **Pause** | 00:00:00.0 |
| **Pre-Calibration** | 2024-02-27 07:35:54 |
| **Post-Calibration** | None |
| **Calibration Deviation** | --- |

## Overall Settings

| | |
|---|---|
| **RMS Weight** | A Weighting |
| **Peak Weight** | Z Weighting |
| **Detector** | Slow |
| **Preamplifier** | PRMLxT1L |
| **Microphone Correction** | Off |
| **Integration Method** | Exponential |
| **Overload** | 121.8 dB |

| | **A** | **C** | **Z** | |
|---|---|---|---|---|
| **Under Range Peak** | 78.1 | 75.1 | **80.1** | dB |
| **Under Range Limit** | **26.1** | 25.9 | 31.0 | dB |
| **Noise Floor** | 16.5 | 16.7 | 21.9 | dB |

## Results

| | | |
|---|---|---|
| **$L_{ASeq}$** | 59.7 | dB |
| **LASE** | 90.0 | dB |
| **EAS** | 110.529 | µPa²h |
| **EAS8** | 2.986 | mPa²h |
| **EAS40** | 14.932 | mPa²h |
| **$LZ_{peak\ (max)}$** | 2024-02-27 08:00:54 | 100.1 dB |
| **$LAS_{max}$** | 2024-02-27 08:00:54 | 74.5 dB |
| **$LAS_{min}$** | 2024-02-27 07:59:20 | 41.4 dB |
| **SEA** | -99.9 | dB |

| | **Exceedance Counts** | **Duration** |
|---|---|---|
| **$LC_{Seq}$** | 69.8 dB | |
| **$LA_{Seq}$** | 59.7 dB | |
| **$LC_{Seq}$ - $LA_{Seq}$** | 10.1 dB | |
| **$LAI_{eq}$** | 60.8 dB | |
| **$LA_{eq}$** | 59.7 dB | |
| **$LAI_{eq}$ - $LA_{eq}$** | 1.1 dB | |

| | **A** | | **C** | | **Z** | |
|---|---|---|---|---|---|---|
| | **dB** | **Time Stamp** | **dB** | **Time Stamp** | **dB** | **Time Stamp** |
| **$L_{eq}$** | 59.7 | | | | | |
| **$L_{S(max)}$** | 74.5 | 2024/02/27 8:00:54 | | | | |
| **$L_{S(min)}$** | 41.4 | 2024/02/27 7:59:20 | | | | |

## Statistics

| | |
|---|---|
| **LAS 5.00** | 63.8 dB |
| **LAS 10.00** | 62.6 dB |
| **LAS 33.30** | 59.7 dB |
| **LAS 50.00** | 57.8 dB |
| **LAS 66.60** | 55.3 dB |
| **LAS 90.00** | 47.9 dB |

## Summary

| | |
|---|---|
| **File Name on Meter** | LxT_Data.179.s |
| **File Name on PC** | LxT_0003285-20240227 084703-LxT_Data.179.ldbin |
| **Serial Number** | 0003285 |
| **Model** | SoundTrack LxT® |
| **Firmware Version** | 2.302 |
| **Location** | |
| **Job Description** | Generations at Green Valley |
| **Note** | ST 2 (short-term 2) |

## Measurement

| | |
|---|---|
| **Description** | |
| **Start** | 2024-02-27 08:47:03 |
| **Stop** | 2024-02-27 09:02:28 |
| **Duration** | 00:15:24.8 |
| **Run Time** | 00:15:24.8 |
| **Pause** | 00:00:00.0 |
| **Pre-Calibration** | 2024-02-27 08:46:24 |
| **Post-Calibration** | None |
| **Calibration Deviation** | --- |

## Overall Settings

| | |
|---|---|
| **RMS Weight** | A Weighting |
| **Peak Weight** | Z Weighting |
| **Detector** | Slow |
| **Preamplifier** | PRMLxT1L |
| **Microphone Correction** | Off |
| **Integration Method** | Exponential |
| **Overload** | 121.8 dB |

| | **A** | **C** | **Z** | |
|---|---|---|---|---|
| **Under Range Peak** | 78.1 | 75.1 | **80.1** | dB |
| **Under Range Limit** | **26.1** | 25.9 | 31.0 | dB |
| **Noise Floor** | 16.5 | 16.7 | 21.9 | dB |

## Results

| | | | |
|---|---|---|---|
| **LASeq** | 45.6 dB | | |
| **LASE** | 75.3 dB | | |
| **EAS** | 3.731 µPa²h | | |
| **EAS8** | 116.185 µPa²h | | |
| **EAS40** | 580.925 µPa²h | | |
| **LZpeak (max)** | 2024-02-27 08:50:21 | 86.4 dB | |
| **LASmax** | 2024-02-27 08:47:37 | 61.4 dB | |
| **LASmin** | 2024-02-27 08:57:02 | 34.3 dB | |
| **SEA** | -99.9 dB | | |

| | **Exceedance Counts** | **Duration** |
|---|---|---|
| **LASeq** | 45.6 dB | |
| **LCSeq - LASeq** | 8.2 dB | |
| **LAIeq** | 48.3 dB | |
| **LAeq** | 45.6 dB | |
| **LAIeq - LAeq** | 2.7 dB | |

| | **A** | | **C** | | **Z** | |
|---|---|---|---|---|---|---|
| | **dB** | **Time Stamp** | **dB** | **Time Stamp** | **dB** | **Time Stamp** |
| **Leq** | 45.6 | | | | | |
| **LS(max)** | 61.4 | 2024/02/27 8:47:37 | | | | |
| **LS(min)** | 34.3 | 2024/02/27 8:57:02 | | | | |
| **LPeak(max)** | | | | | 86.4 | 2024/02/27 8:50:21 |

| | |
|---|---|
| **Overload Count** | 0 |
| **Overload Duration** | 0.0 s |

## Statistics

| | |
|---|---|
| **LAS 5.00** | 49.3 dB |
| **LAS 10.00** | 45.9 dB |
| **LAS 33.30** | 42.4 dB |
| **LAS 50.00** | 41.3 dB |
| **LAS 66.60** | 40.4 dB |
| **LAS 90.00** | 38.5 dB |

## Summary

| | |
|---|---|
| **File Name on Meter** | LxT_Data.180.s |
| **File Name on PC** | LxT_0003285-20240227 094522-LxT_Data.180.ldbin |
| **Serial Number** | 0003285 |
| **Model** | SoundTrack LxT® |
| **Firmware Version** | 2.302 |
| **Job Description** | Generations at Green Valley |
| **Note** | LT1 (long term 1) |

## Measurement

| | |
|---|---|
| **Description** | |
| **Start** | 2024-02-27 09:45:22 |
| **Stop** | 2024-02-28 10:26:46 |
| **Duration** | 24:41:23.703 |
| **Run Time** | 24:41:23.703 |
| **Pause** | 00:00:00.0 |
| **Pre-Calibration** | 2024-02-27 09:42:06 |
| **Post-Calibration** | None |
| **Calibration Deviation** | --- |

## Overall Settings

| | |
|---|---|
| **RMS Weight** | A Weighting |
| **Peak Weight** | Z Weighting |
| **Detector** | Slow |
| **Preamplifier** | PRMLxT1L |
| **Microphone Correction** | Off |
| **Integration Method** | Exponential |
| **Overload** | 121.8 dB |

| | A | C | Z | |
|---|---|---|---|---|
| **Under Range Peak** | 78.1 | 75.1 | **80.1** | dB |
| **Under Range Limit** | **26.1** | 25.9 | 31.0 | dB |
| **Noise Floor** | 16.5 | 16.7 | 21.9 | dB |

## Results

| | | |
|---|---|---|
| **LASeq** | 41.9 | dB |
| **LASE** | 91.4 | dB |
| **EAS** | 152.961 | µPa²h |
| **EAS8** | 49.562 | µPa²h |
| **EAS40** | 247.811 | µPa²h |
| **LZpeak (max)** | 2024-02-27 12:18:26 | 108.7 dB |
| **LASmax** | 2024-02-27 09:46:44 | 76.7 dB |
| **LASmin** | 2024-02-27 23:09:17 | 22.8 dB |
| **SEA** | -99.9 | dB |

| | Exceedance Counts | | Duration |
|---|---|---|---|
| **LCSeq** | 56.4 | dB | |
| **LASeq** | 41.9 | dB | |
| **LCSeq - LASeq** | 14.5 | dB | |
| **LAleq** | 48.2 | dB | |
| **LAeq** | 41.9 | dB | |
| **LAleq - LAeq** | 6.3 | dB | |

| | A | | C | | Z | |
|---|---|---|---|---|---|---|
| | **dB** | **Time Stamp** | **dB** | **Time Stamp** | **dB** | **Time Stamp** |
| **Leq** | 41.9 | | | | | |
| **LS(max)** | 76.7 | 2024/02/27 9:46:44 | | | | |
| **LS(min)** | 22.8 | 2024/02/27 23:09:17 | | | | |
| **LPeak(max)** | | | | | 108.7 | 2024/02/27 12:18:26 |

## Statistics

| | | |
|---|---|---|
| **LAS 5.00** | 46.4 | dB |
| **LAS 10.00** | 43.2 | dB |
| **LAS 33.30** | 38.5 | dB |
| **LAS 50.00** | 35.1 | dB |
| **LAS 66.60** | 32.0 | dB |
| **LAS 90.00** | 26.5 | dB |

| LT 1 Record # | Date | Time | Run Duration | Run Time | LASeq | LASE | LASmin | LASmin Time |
|---|---|---|---|---|---|---|---|---|
| 1 | 2024-02-27 | 09:45:22 | 00:14:37.7 | 00:14:37.7 | 53.8 | 83.2 | 36.5 | 09:59:57 |
| 2 | 2024-02-27 | 10:00:00 | 01:00:00.0 | 01:00:00.0 | 45.1 | 80.7 | 32.9 | 10:48:50 |
| 3 | 2024-02-27 | 11:00:00 | 01:00:00.0 | 01:00:00.0 | 44.1 | 79.7 | 34.6 | 11:00:50 |
| 4 | 2024-02-27 | 12:00:00 | 01:00:00.0 | 01:00:00.0 | 44.4 | 80.0 | 35.0 | 12:29:49 |
| 5 | 2024-02-27 | 13:00:00 | 01:00:00.0 | 01:00:00.0 | 43.3 | 78.9 | 34.0 | 13:35:04 |
| 6 | 2024-02-27 | 14:00:00 | 01:00:00.0 | 01:00:00.0 | 43.3 | 78.9 | 34.0 | 14:55:40 |
| 7 | 2024-02-27 | 15:00:00 | 01:00:00.0 | 01:00:00.0 | 41.8 | 77.4 | 31.7 | 15:53:28 |
| 8 | 2024-02-27 | 16:00:00 | 01:00:00.0 | 01:00:00.0 | 42.9 | 78.5 | 28.6 | 16:55:19 |
| 9 | 2024-02-27 | 17:00:00 | 01:00:00.0 | 01:00:00.0 | 39.2 | 74.8 | 27.5 | 17:36:33 |
| 10 | 2024-02-27 | 18:00:00 | 01:00:00.0 | 01:00:00.0 | 40.0 | 75.6 | 29.5 | 18:51:18 |
| 11 | 2024-02-27 | 19:00:00 | 01:00:00.0 | 01:00:00.0 | 44.1 | 79.7 | 27.7 | 19:54:43 |
| 12 | 2024-02-27 | 20:00:00 | 01:00:00.0 | 01:00:00.0 | 33.7 | 69.3 | 26.8 | 20:45:09 |
| 13 | 2024-02-27 | 21:00:00 | 01:00:00.0 | 01:00:00.0 | 38.1 | 73.7 | 27.3 | 21:31:34 |
| 14 | 2024-02-27 | 22:00:00 | 01:00:00.0 | 01:00:00.0 | 34.5 | 70.1 | 25.2 | 22:57:35 |
| 15 | 2024-02-27 | 23:00:00 | 01:00:00.0 | 01:00:00.0 | 31.2 | 66.8 | 22.8 | 23:09:17 |
| 16 | 2024-02-28 | 00:00:00 | 01:00:00.0 | 01:00:00.0 | 29.2 | 64.8 | 23.8 | 00:48:56 |
| 17 | 2024-02-28 | 01:00:00 | 01:00:00.0 | 01:00:00.0 | 35.0 | 70.6 | 23.9 | 01:49:06 |
| 18 | 2024-02-28 | 02:00:00 | 01:00:00.0 | 01:00:00.0 | 29.7 | 65.3 | 23.1 | 02:17:54 |
| 19 | 2024-02-28 | 03:00:00 | 01:00:00.0 | 01:00:00.0 | 30.0 | 65.6 | 27.7 | 03:05:49 |
| 20 | 2024-02-28 | 04:00:00 | 01:00:00.0 | 01:00:00.0 | 36.4 | 72.0 | 28.1 | 04:17:14 |
| 21 | 2024-02-28 | 05:00:00 | 01:00:00.0 | 01:00:00.0 | 41.4 | 77.0 | 29.6 | 05:01:27 |
| 22 | 2024-02-28 | 06:00:00 | 01:00:00.0 | 01:00:00.0 | 39.9 | 75.5 | 32.7 | 06:07:29 |
| 23 | 2024-02-28 | 07:00:00 | 01:00:00.0 | 01:00:00.0 | 44.0 | 79.6 | 35.4 | 07:01:23 |
| 24 | 2024-02-28 | 08:00:00 | 01:00:00.0 | 01:00:00.0 | 43.3 | 78.9 | 36.8 | 08:41:54 |
| 25 | 2024-02-28 | 09:00:00 | 01:00:00.0 | 01:00:00.0 | 41.3 | 76.9 | 33.6 | 09:44:55 |
| 26 | 2024-02-28 | 10:00:00 | 00:26:46.0 | 00:26:46.0 | 43.0 | 75.1 | 33.0 | 10:14:39 |

| LASmax | LASmax Time | LAS5.00 | LAS10.00 | LAS33.30 | LAS50.00 | LAS66.60 | LAS90.00 |
|---|---|---|---|---|---|---|---|
| 76.7 | 09:46:44 | 57.7 | 53.5 | 44.9 | 41.5 | 40.1 | 38.2 |
| 63.2 | 10:13:10 | 49.4 | 46.5 | 41.2 | 39.8 | 38.6 | 36.3 |
| 56.2 | 11:30:50 | 50.4 | 47.5 | 42.4 | 41.0 | 39.8 | 38.2 |
| 64.1 | 12:57:00 | 48.0 | 45.4 | 41.6 | 40.4 | 39.5 | 37.9 |
| 57.5 | 13:09:16 | 49.1 | 47.2 | 41.6 | 40.0 | 38.8 | 37.1 |
| 56.3 | 14:03:42 | 49.4 | 47.2 | 41.3 | 39.6 | 38.5 | 36.6 |
| 61.4 | 15:38:57 | 46.1 | 43.0 | 38.4 | 37.0 | 35.9 | 34.3 |
| 63.4 | 16:29:47 | 45.2 | 41.7 | 36.1 | 34.4 | 33.5 | 32.2 |
| 58.9 | 17:05:07 | 42.2 | 39.0 | 34.2 | 32.8 | 31.8 | 30.4 |
| 54.8 | 18:31:20 | 46.9 | 41.0 | 37.0 | 35.2 | 34.1 | 32.3 |
| 66.2 | 19:50:51 | 46.8 | 41.4 | 34.8 | 33.4 | 32.2 | 30.6 |
| 45.3 | 20:34:08 | 38.3 | 36.5 | 32.9 | 31.7 | 30.8 | 29.3 |
| 56.8 | 21:07:51 | 38.6 | 35.5 | 32.9 | 32.0 | 31.1 | 29.6 |
| 53.0 | 22:59:54 | 36.0 | 34.5 | 32.0 | 30.9 | 29.9 | 28.0 |
| 51.0 | 23:00:00 | 35.9 | 32.7 | 28.3 | 27.2 | 26.3 | 25.1 |
| 49.3 | 00:07:52 | 30.5 | 28.7 | 26.4 | 25.6 | 25.2 | 24.6 |
| 53.6 | 01:35:34 | 37.6 | 29.0 | 25.7 | 25.2 | 24.8 | 24.4 |
| 53.7 | 02:00:36 | 30.4 | 29.8 | 28.3 | 25.8 | 25.0 | 24.2 |
| 41.1 | 03:39:22 | 31.3 | 30.7 | 29.9 | 29.7 | 29.4 | 29.0 |
| 59.1 | 04:23:48 | 33.4 | 32.5 | 31.1 | 30.5 | 30.0 | 29.2 |
| 60.9 | 05:37:45 | 47.4 | 40.7 | 34.4 | 33.6 | 33.0 | 31.9 |
| 55.3 | 06:48:29 | 44.5 | 42.5 | 38.5 | 37.1 | 36.0 | 34.3 |
| 64.1 | 07:56:33 | 47.2 | 45.3 | 42.5 | 41.4 | 40.5 | 39.0 |
| 57.0 | 08:42:51 | 48.0 | 46.3 | 42.1 | 41.1 | 40.3 | 39.1 |
| 56.7 | 09:52:26 | 44.1 | 42.3 | 40.1 | 39.2 | 38.0 | 36.0 |
| 68.0 | 10:25:52 | 47.9 | 44.8 | 39.5 | 37.9 | 36.8 | 35.1 |

## 12-Hour Leq Calculator (Daytime Leq)

| Hour | Hourly Leq (dB) | Linear Power (P) |
|---|---|---|
| 1 | 45.1 | 32359.36569 |
| 2 | 44.1 | 25703.95783 |
| 3 | 44.4 | 27542.28703 |
| 4 | 43.3 | 21379.6209 |
| 5 | 43.3 | 21379.6209 |
| 6 | 41.8 | 15135.61248 |
| 7 | 42.9 | 19498.446 |
| 8 | 39.2 | 8317.637711 |
| 9 | 40 | 10000 |
| 10 | 44 | 25118.86432 |
| 11 | 43.3 | 21379.6209 |
| 12 | 41.3 | 13489.62883 |
| | *Sum* | 241304.6626 |
| | *Avg. Sound Power* | 20108.72188 |
| | **10-hour Leq** | **43.0** |

Note

The sheet converts dBA noise levels to sound power (watts), for each individual hour of the measurment period. Then SP values are summed and averaged, then converted back to dBA to obtain the 8-hour Leq

## 12-Hour Leq Calculator (Nighttime Leq)

| Hour | Hourly Leq (dB) | Linear Power (P) |
|---|---|---|
| 1 | 44.1 | 25703.95783 |
| 2 | 33.7 | 2344.228815 |
| 3 | 38.1 | 6456.54229 |
| 4 | 34.5 | 2818.382931 |
| 5 | 31.2 | 1318.256739 |
| 6 | 29.2 | 831.7637711 |
| 7 | 35 | 3162.27766 |
| 8 | 29.7 | 933.2543008 |
| 9 | 30 | 1000 |
| 10 | 36.4 | 4365.158322 |
| 11 | 41.4 | 13803.84265 |
| 12 | 39.9 | 9772.37221 |
| | *Sum* | 72510.03751 |
| | *Avg. Sound Power* | 6042.503126 |
| | **10-hour Leq** | **37.8** |

Note

The sheet converts dBA noise levels to sound power (watts), for each individual hour of the measurment period. Then SP values are summed and averaged, then converted back to dBA to obtain the 8-hour Leq

# Long-Term Noise Measurement Summary

**KEY:** Orange cells are for input.
Grey cells are intermediate calculations performed by the model.
Green cells are data to present in a written analysis (output).

**Measurement Site:** Proposed site of Edgewood hotel complex
**Measurement Date:** 2/27/2024
**Project Name:** Generations at Green Calley

| Hour of Day (military time) | Sound Level Leq (dBA) | Sound Power =10*Log(dBA/10) | Computation of CNEL: Period of 24-Hour Day (1=included, 0=not) Day | Evening | Night | Sound Power Breakdown by Period of Day Day | Evening | Night |
|---|---|---|---|---|---|---|---|---|
| 0:00 | 29.2 | 832 | 0 | 0 | 1 | 0 | 0 | 832 |
| 1:00 | 35.0 | 3,162 | 0 | 0 | 1 | 0 | 0 | 3,162 |
| 2:00 | 29.7 | 933 | 0 | 0 | 1 | 0 | 0 | 933 |
| 3:00 | 30.0 | 1,000 | 0 | 0 | 1 | 0 | 0 | 1,000 |
| 4:00 | 36.4 | 4,365 | 0 | 0 | 1 | 0 | 0 | 4,365 |
| 5:00 | 41.4 | 13,804 | 0 | 0 | 1 | 0 | 0 | 13,804 |
| 6:00 | 39.9 | 9,772 | 0 | 0 | 1 | 0 | 0 | 9,772 |
| 7:00 | 44.0 | 25,119 | 1 | 0 | 0 | 25,119 | 0 | 0 |
| 8:00 | 43.3 | 21,380 | 1 | 0 | 0 | 21,380 | 0 | 0 |
| 9:00 | 41.3 | 13,490 | 1 | 0 | 0 | 13,490 | 0 | 0 |
| 10:00 | 45.1 | 32,359 | 1 | 0 | 0 | 32,359 | 0 | 0 |
| 11:00 | 44.1 | 25,704 | 1 | 0 | 0 | 25,704 | 0 | 0 |
| 12:00 | 44.4 | 27,542 | 1 | 0 | 0 | 27,542 | 0 | 0 |
| 13:00 | 43.3 | 21,380 | 1 | 0 | 0 | 21,380 | 0 | 0 |
| 14:00 | 43.3 | 21,380 | 1 | 0 | 0 | 21,380 | 0 | 0 |
| 15:00 | 41.8 | 15,136 | 1 | 0 | 0 | 15,136 | 0 | 0 |
| 16:00 | 42.9 | 19,498 | 1 | 0 | 0 | 19,498 | 0 | 0 |
| 17:00 | 39.2 | 8,318 | 1 | 0 | 0 | 8,318 | 0 | 0 |
| 18:00 | 40.0 | 10,000 | 1 | 0 | 0 | 10,000 | 0 | 0 |
| 19:00 | 44.1 | 25,704 | 0 | 1 | 0 | 0 | 25,704 | 0 |
| 20:00 | 33.7 | 2,344 | 0 | 1 | 0 | 0 | 2,344 | 0 |
| 21:00 | 38.1 | 6,457 | 0 | 1 | 0 | 0 | 6,457 | 0 |
| 22:00 | 34.5 | 2,818 | 0 | 0 | 1 | 0 | 0 | 2,818 |
| 23:00 | 31.2 | 1,318 | 0 | 0 | 1 | 0 | 0 | 1,318 |
| | | 1 | | | | | | |
| | | | **Sum of Sound Power during Period wo/penalty** | | | 241,305 | 34,505 | 38,005 |
| | | | **Log Factor for CNEL Penalty (i.e., 10*log(x))** | | | 1 | 3 | 10 |
| | | | **Sound Power during Period with penalty** | | | 241,305 | 103,514 | 380,053 |

| | |
|---|---|
| **Total Daily Sound Power, with penalties** | 724,872 |
| **Hours per Day** | 24 |
| **Average Hourly Sound Power, with penalties** | 30,203 |
| **CNEL** | 44.8 |

*Ldn computation on next page.*

# Appendix I

## Vehicle Miles Traveled Analysis

Kimley»Horn

# Memorandum

**To:** Aidan Barry

**From:** Matt Weir, P.E., T.E., PTOE, $RSP_1$

***Re:*** ***Generations at Green Valley – VMT Analysis***
El Dorado County, California

**Date:** November 3, 2023

This memorandum documents a Vehicle Miles Traveled (VMT) analysis completed for the proposed Generations at Green Valley (the "Project" or "Proposed Project") in El Dorado County, CA. The Proposed Project is expected to consist of a total of 380 single-family residential units, 214 of which will be age-restricted. With the passage of Senate Bill 743 (SB 743), VMT has become an important indicator for determining if new development will result in a "significant transportation impact" under the California Environmental Quality Act (CEQA). This memorandum summarizes the VMT analysis and resultant findings for the proposed Generations at Green Valley development project.

## Purpose of Analysis

Senate Bill 743 (2013) changed the focus of transportation impact analyses in CEQA from measuring impacts to drivers, to measuring the impact of driving. The change was made by replacing Level of Service (LOS) with VMT. This shift in transportation impact focus was intended to better align transportation impact analyses and mitigation outcomes with the State's goals to reduce greenhouse gas (GHG) emissions, encourage infill development, and improve public health through more active transportation. Level of service or other delay metrics may still be used to evaluate the impact of projects on drivers as part of land use entitlement review and impact fee programs. Accordingly, traditional LOS was considered for the analysis of the Proposed Project and is provided under separate cover.

In January 2019, the Natural Resources Agency finalized updates to the CEQA Guidelines including the incorporation of SB 743 modifications. The Guidelines' changes were approved by the Office of Administrative Law and are now in effect. The provisions apply statewide as of July 1, 2020.

To aid lead agencies with SB 743 implementation, the Governor's Office of Planning and Research (OPR) produced the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018) that provides guidance regarding the variety of implementation questions they face with respect to shifting to a VMT metric. Key guidance from this document includes:

- VMT is the most appropriate metric to evaluate a project's transportation impact.
- OPR recommends tour- and trip-based travel models to estimate VMT, but ultimately defers to local agencies to determine the appropriate tools.
- OPR recommends measuring VMT for residential and office projects on a "per rate" basis.
- Lead agencies have the discretion to set or apply their own significance thresholds.

In 2019 the El Dorado County Transportation Commission (EDCTC) completed the *El Dorado County and City of Placerville SB 743 Implementation Plan* (July 19, 2019) to support El Dorado County and the City of Placerville with implementation of SB 743, including the selection of VMT analysis methodology, setting thresholds of significance, and potential mitigation. With Resolution 141-20203 (October 6, 2020), the El Dorado County Board of Supervisors adopted VMT thresholds of significance for purposes of analyzing transportation impacts under CEQA.

The County's VMT thresholds consider the VMT performance of residential projects using the efficiency metric of VMT per capita. The El Dorado County VMT threshold of significance is summarized below:

- Residential – 15% below baseline unincorporated countywide VMT per Capita (Unincorporated County average is currently 22.5 VMT per Capita with a threshold of 19.1 VMT per Capita as shown in **Appendix A**).

## Methodology and Assumptions

Consistent with Resolution 141-2020[1], the El Dorado County Travel Demand Model (EDC TDM) was used as the principal tool to determine VMT. The EDC TDM contains a base year of 2018 and future year of 2040, but only the base year version of the model was used to determine the Project's VMT impact. In addition, the EDC TDM was recently updated to include a VMT analysis tool, which was used to complete the analysis of the Project. The VMT estimation tool generates estimates in a manner that is consistent with OPR's guidelines. In addition, to provide a full accounting of vehicle travel, the EDC TDM provides VMT estimates that include the VMT from intrazonal vehicle trips and trip length adjustments for the trips that enter or exit the area covered by the EDC TDM.

To determine the length of intrazonal trips that both start and end within each Traffic Analysis Zone (TAZ), an estimation process was conducted as the trips are never assigned to the roadway network as they never leave the TAZ. Therefore, using the EDC TDM, the intrazonal trip lengths are estimated by calculating half of the shortest travel distance between a given TAZ and all the other TAZs, using the EDC TDM's midday assignment. The midday 5-hour assignment period is used to calculate intrazonal travel because there is generally less traffic and less congestion (i.e., compared to the AM or PM peak periods) and is more representative of average daily conditions.

Finally, the external trips that either start (XI) or end (IX) outside of the model area needed to have their trip lengths adjusted as well. Entering (XI) and exiting (XI) trip lengths were averaged using the California Statewide Travel Demand Model (CSTDM). Because of the sample size limitations with the California Household Travel Survey (CHTS) data (i.e., only 163 recorded trips), trip length adjustments from the CSTDM were used.

The TAZ structure was modified slightly to separate the Project from the TAZ within which it is located (TAZ 212) into its own TAZ, TAZ 630. Other than adding a centroid connector to load Project traffic to the roadway network, no other modifications were made to the EDC TDM roadway network as a part of this analysis.

Based on the adopted guidelines and thresholds, a project is considered to result in a significant impact if the VMT per Capita for the project exceeds 85-percent of the County average for the respective metric as noted in the previous section.

## Project Land Use Model Input Conversion

Based on the Project's land use plan, it is assumed that the Project is comprised of 214 age restricted residential units and 166 single-family residential units. While the EDC TDM differentiates between household types, single-family versus multi-family, it does not have a specific step to synthesize the population of these households separately. Therefore, the population for the single-family units was synthesized in a manner consistent with the existing households in the TAZ adjacent to the Proposed Project that was determined to most accurately represent the Proposed Project (TAZ 207). Furthermore, as the EDC TDM does not contain a housing type for age restricted units, these units were added as single-family units and the population variables were modified to best represent the future population

[1] *Board of Supervisors of the County of El Dorado Resolution 141-2020*. El Dorado County Board of Supervisors. October 2020.

demographics. These variables included household size, number of workers, and household income. While no specific demographic information could be obtained for age restricted developments, it was assumed that only 10-percent of the household contained at least one (1) worker and the remainder of the households did not have a single worker. In addition, only 15-percent of the households were assumed to have three (3) residents, while the remainder of the households were assumed to be 1- or 2-person households.

This approach resulted in a total Project population of 908 being included in the model to represent the total 380 units. Of the 908 total residents, 420 were assumed to live within the 214 age-restricted units and 488 were assumed to live within the 166 single-family residential units.

## Analysis

VMT was calculated for the Project using three separate steps. First, the travel distance between each pair of TAZs was calculated using the loaded network to model real world conditions. This step included the trip length alteration for intrazonal, XI, and IX trips. The second step calculated the VMT between each TAZ by multiplying the number of trips between each TAZ by the calculated distance between each TAZ, including the intrazonal trips. Finally, the VMT was categorized as either home-based or home-based work VMT. This categorization is completed by determining the percentage of vehicle productions and attractions by trip purpose and direction (departures and returns). These percentages are then applied to the total VMT estimates, to determine the VMT by trip purpose and direction. The home-based VMT summarizes VMT by the production TAZ for residential uses.

To determine the residential VMT produced by the Project, the Home Based VMT for the Project TAZ (TAZ 630) was totaled and divided by the total residential population to obtain a VMT per Capita value for the Project. Detailed VMT outputs are shown in Appendix B.

Table 1 summarizes the VMT per Capita for the proposed Project and compares it to the County threshold. As shown in Table 1, the Project results in a VMT per Capita above the County's threshold.

Table 1 – Vehicle Miles Traveled (VMT) by Land Use and Scenario

| Scenario | VMT/Capita (Residential) |
|---|---|
| **Calculated VMT per Capita by Scenario** | |
| **County Average** | **22.5** |
| **County Threshold** | **19.1** |
| 2018 Plus Project | 19.6 |
| **VMT per Capita as a Percent of Threshold by Scenario** | |
| 2018 Plus Project | 103% |
| **Over Threshold?** | |
| 2018 Plus Project | **Yes** |

*Cumulative Analysis*

A project's Cumulative impacts should be evaluated for consistency with the County General Plan zoning. Because the Proposed Project is not consistent with the County's General Plan zoning, it is understood that the Project is not captured in the County's future land use projections. Therefore, the Project's VMT is not accounted for in the future and the Proposed Project's impacts for Cumulative (2040) Conditions must be analyzed.

VMT was calculated for the Project for Cumulative (2040) Conditions consistent with the methodology outlined above for Existing Conditions. As with the Existing Conditions analysis, the home-based VMT summarizes VMT by the production TAZ for residential uses. To determine the residential VMT produced by the Project, the Home Based VMT for the Project TAZ (TAZ 630) for Cumulative (2040) Conditions was totaled and divided by the total residential population for the proposed Project to obtain a VMT per Capita value for the Project. Detailed VMT outputs are shown in Appendix C.

Table 2 summarizes the VMT per Capita for the proposed Project and compares it to the County threshold. Note that this threshold is consistent with the one calculated for Existing Conditions rather than being recalculated for Cumulative (2040) Conditions. Because OPR recommends that thresholds are not recalculated for Cumulative (2040) Conditions, the threshold shown in Table 2 is consistent with the threshold shown in Table 1. As presented in Table 2, the Project results in a VMT per Capita above the County's threshold.

Table 2 – Vehicle Miles Traveled (VMT) by Land Use and Scenario (2040)

| Scenario | VMT/Capita (Residential) |
|---|---|
| **Calculated VMT per Capita by Scenario** | |
| **County Average (2018)** | **22.5** |
| **County Threshold (2018)** | **19.1** |
| 2040 Plus Project | 19.7 |
| **VMT per Capita as a Percent of Threshold by Scenario** | |
| 2040 Plus Project | 103% |
| **Over Threshold?** | |
| 2040 Plus Project | **Yes** |

## Findings

Based on the results of this analysis, the following findings are made:

- The Project land uses exceed the threshold of significance for the 2018 Project scenario. *The project is determined to have a significant transportation impact for Existing Conditions.*
- The Project is not consistent with the County's General Plan zoning and it is understood that the Project is not captured in the County's future land use projections. Therefore, it was determined that the Project's Cumulative impacts will need to be analyzed in a manner consistent with 2018 Conditions. The Project land uses exceed the threshold of significance for the Cumulative (2040) Project scenario. *Therefore, the Project is determined to have a significant transportation impact for Cumulative (2040) Conditions.*
- The Project applicant will work with El Dorado County staff to determine feasible and implementable mitigation solutions to potentially reduce the proposed Project's VMT per capita below the County's threshold.

## Attachments

Appendix A – Unincorporated County Vehicle Miles Traveled (VMT) Details
Appendix B – Generations at Green Valley (Project) Vehicle Miles Traveled (VMT) Details
Appendix C – Generations at Green Valley (Project) Vehicle Miles Traveled (VMT) Details for Cumulative (2040) Conditions

# Appendix A

*Unincorporated County Vehicle Miles Traveled (VMT) Details*

# Appendix A - Unincorporated County Vehicle Miles Traveled (VMT) Details

***VMT Summary by Jurisdiction - 2018 Baseline Scenario***

| Jurisdiction | VMT Estimates | | | VMT Efficiency Metrics | | Population Details | |
|---|---|---|---|---|---|---|---|
| | Total OD VMT | Home-based PA VMT | Home-based Work PA VMT | Home-based VMT per Capita | Home-based Work VMT per Employee | Total Population | Total Employment |
| Unincorporated El Dorado County (Average) | 3,606,897 | 3,046,839 | 409,693 | 22.5 | 12.8 | 135,715 | 32,131 |
| Unincorporated El Dorado County (Threshold) | - | - | - | 19.1 | 10.8 | - | - |

***VMT Summary by Jurisdiction - 2018 Baseline Scenario***

| TAZ | Community Region | In the City of Placerville (1=Yes, 0=N | Total OD VMT | Home-based PA VMT | Home-Based Work PA VMT | Households | Population | Employement | Service Population | Total OD VMT per Service Population |
|---|---|---|---|---|---|---|---|---|---|---|
| 1.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,166 | 2,626 | 327 | 46 | 75 | 16 | 91 | 46.0 |
| 2.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 23,118 | 32,047 | 463 | 525 | 1,185 | 34 | 1,219 | 19.0 |
| 3.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,949 | 3,745 | 42 | 34 | 88 | 0 | 88 | 33.6 |
| 4.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,536 | 1,540 | 52 | 16 | 34 | 2 | 36 | 43.0 |
| 5.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,866 | 4,046 | 27 | 33 | 73 | 0 | 73 | 39.5 |
| 6.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 12,336 | 15,861 | 354 | 270 | 646 | 9 | 655 | 18.8 |
| 7.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 25,856 | 33,452 | 993 | 516 | 1,119 | 71 | 1,190 | 21.7 |
| 8.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,718 | 792 | 751 | 14 | 36 | 60 | 96 | 28.3 |
| 9.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 28,499 | 33,395 | 1,708 | 482 | 1,240 | 117 | 1,357 | 21.0 |
| 10.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 11.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 12.00 | Outside of County | 0 | 39,353 | 30,977 | 1,872 | 663 | 1,741 | 96 | 1,837 | 21.4 |
| 13.00 | Outside of County | 0 | 31,126 | 35,939 | 676 | 775 | 1,995 | 0 | 1,995 | 15.6 |
| 14.00 | Outside of County | 0 | 64,157 | 72,184 | 1,543 | 1,502 | 4,068 | 32 | 4,100 | 15.6 |
| 15.00 | Outside of County | 0 | 497 | 523 | 10 | 10 | 23 | 0 | 23 | 22.1 |
| 16.00 | Outside of County | 0 | 56,270 | 8,955 | 7,530 | 149 | 378 | 434 | 812 | 69.3 |
| 17.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 18.00 | Outside of County | 0 | 1,564 | 620 | 67 | 41 | 116 | 0 | 116 | 13.5 |
| 19.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 20.00 | Outside of County | 0 | 219 | 18 | 118 | 1 | 1 | 5 | 6 | 36.5 |
| 21.00 | Outside of County | 0 | 5,220 | 50 | 2,538 | 1 | 2 | 112 | 114 | 45.8 |
| 22.00 | Outside of County | 0 | 2,239 | 269 | 579 | 2 | 6 | 23 | 29 | 77.2 |
| 23.00 | Outside of County | 0 | 58,930 | 23,741 | 6,314 | 101 | 273 | 244 | 517 | 114.1 |
| 24.00 | Outside of County | 0 | 48 | 30 | 1 | 1 | 1 | 0 | 1 | 47.5 |
| 25.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 26.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 27.00 | Outside of County | 0 | 1,320 | 266 | 500 | 2 | 6 | 22 | 28 | 47.1 |
| 28.00 | Outside of County | 0 | 12,524 | 14,738 | 377 | 123 | 332 | 6 | 338 | 37.0 |
| 29.00 | Outside of County | 0 | 7,845 | 9,174 | 242 | 72 | 192 | 5 | 197 | 39.8 |
| 30.00 | Outside of County | 0 | 6,050 | 0 | 3,192 | 0 | 0 | 133 | 133 | 45.5 |
| 31.00 | Outside of County | 0 | 5,557 | 4,119 | 1,039 | 44 | 94 | 45 | 139 | 39.9 |
| 32.00 | Outside of County | 0 | 24,953 | 6,831 | 622 | 676 | 1,526 | 0 | 1,526 | 16.3 |
| 33.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 34.00 | Outside of County | 0 | 8,755 | 9,498 | 584 | 75 | 191 | 16 | 207 | 42.3 |
| 35.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 36.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 37.00 | Outside of County | 0 | 5,042 | 0 | 2,670 | 0 | 0 | 178 | 178 | 28.3 |
| 38.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 39.00 | Outside of County | 0 | 24,310 | 22,457 | 3,316 | 666 | 1,569 | 227 | 1,796 | 13.5 |
| 40.00 | Outside of County | 0 | 112,464 | 25,842 | 18,883 | 916 | 2,079 | 1,839 | 3,918 | 28.7 |
| 41.00 | Outside of County | 0 | 30,906 | 26,574 | 3,958 | 544 | 1,271 | 203 | 1,474 | 21.0 |
| 42.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 43.00 | Outside of County | 0 | 53,527 | 63,304 | 1,203 | 828 | 2,045 | 0 | 2,045 | 26.2 |
| 44.00 | Outside of County | 0 | 79,459 | 76,876 | 3,256 | 1,069 | 2,614 | 95 | 2,709 | 29.3 |
| 45.00 | Outside of County | 0 | 101,352 | 24,241 | 14,670 | 906 | 2,057 | 1,357 | 3,414 | 29.7 |
| 46.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 47.00 | Outside of County | 0 | 100,800 | 0 | 42,751 | 0 | 0 | 2,398 | 2,398 | 42.0 |
| 48.00 | Outside of County | 0 | 71,735 | 71,936 | 3,413 | 1,203 | 3,068 | 121 | 3,189 | 22.5 |
| 49.00 | Outside of County | 0 | 152,679 | 0 | 78,101 | 0 | 0 | 4,642 | 4,642 | 32.9 |
| 50.00 | Outside of County | 0 | 120,870 | 85,622 | 19,287 | 1,025 | 2,430 | 826 | 3,256 | 37.1 |
| 51.00 | Outside of County | 0 | 127,937 | 69,592 | 18,217 | 1,768 | 4,253 | 1,237 | 5,490 | 23.3 |
| 52.00 | Outside of County | 0 | 45,479 | 25,262 | 4,454 | 297 | 667 | 240 | 907 | 50.1 |
| 53.00 | Outside of County | 0 | 113,884 | 87,730 | 8,465 | 1,335 | 3,452 | 377 | 3,829 | 29.7 |
| 54.00 | Outside of County | 0 | 93,497 | 36,350 | 38,701 | 476 | 1,153 | 1,827 | 2,980 | 31.4 |
| 55.00 | Outside of County | 0 | 82,632 | 38,237 | 12,452 | 675 | 1,583 | 800 | 2,383 | 34.7 |
| 56.00 | Outside of County | 0 | 34,972 | 40,102 | 993 | 820 | 1,933 | 4 | 1,937 | 18.1 |
| 57.00 | Outside of County | 0 | 162,092 | 0 | 113,336 | 0 | 0 | 7,375 | 7,375 | 22.0 |
| 58.00 | Outside of County | 0 | 43,751 | 24,397 | 6,802 | 465 | 1,160 | 388 | 1,548 | 28.3 |
| 59.00 | Outside of County | 0 | 426 | 110 | 173 | 2 | 4 | 9 | 13 | 32.7 |
| 60.00 | Outside of County | 0 | 205,449 | 17,434 | 103,017 | 238 | 478 | 4,236 | 4,714 | 43.6 |
| 61.00 | Outside of County | 0 | 277,015 | 193,125 | 22,414 | 2,205 | 5,227 | 797 | 6,024 | 46.0 |
| 62.00 | Outside of County | 0 | 55,666 | 318 | 26,745 | 4 | 8 | 1,150 | 1,158 | 48.1 |

***VMT Summary by Jurisdiction - 2018 Baseline Scenario***

| TAZ | Community Region | In the City of Placerville (1=Yes, 0=N | Total OD VMT | Home-based PA VMT | Home-Based Work PA VMT | Households | Population | Employement | Service Population | Total OD VMT per Service Population |
|---|---|---|---|---|---|---|---|---|---|---|
| 63.00 | Outside of County | 0 | 114,425 | 18,521 | 51,559 | 340 | 756 | 3,083 | 3,839 | 29.8 |
| 64.00 | Outside of County | 0 | 79,435 | 60,433 | 11,462 | 865 | 2,156 | 560 | 2,716 | 29.2 |
| 65.00 | Outside of County | 0 | 10,503 | 11,624 | 218 | 136 | 338 | 0 | 338 | 31.1 |
| 66.00 | Outside of County | 0 | 62,374 | 51,041 | 4,282 | 826 | 1,950 | 172 | 2,122 | 29.4 |
| 67.00 | Outside of County | 0 | 10,409 | 0 | 2,797 | 0 | 0 | 178 | 178 | 58.5 |
| 68.00 | Outside of County | 0 | 55,078 | 32,867 | 11,777 | 616 | 1,314 | 679 | 1,993 | 27.6 |
| 69.00 | Outside of County | 0 | 143,872 | 90,934 | 38,058 | 1,588 | 4,122 | 2,320 | 6,442 | 22.3 |
| 70.00 | Outside of County | 0 | 210,170 | 801 | 126,672 | 0 | 0 | 6,956 | 6,956 | 30.2 |
| 71.00 | Outside of County | 0 | 107,548 | 111,353 | 4,863 | 1,231 | 3,088 | 121 | 3,209 | 33.5 |
| 72.00 | Outside of County | 0 | 247,277 | 358 | 132,064 | 0 | 0 | 5,133 | 5,133 | 48.2 |
| 73.00 | Outside of County | 0 | 122,122 | 0 | 80,001 | 0 | 0 | 5,627 | 5,627 | 21.7 |
| 74.00 | Outside of County | 0 | 176,117 | 21,981 | 81,378 | 435 | 1,022 | 4,728 | 5,750 | 30.6 |
| 75.00 | Outside of County | 0 | 106,895 | 77,981 | 27,259 | 1,936 | 4,401 | 1,866 | 6,267 | 17.1 |
| 76.00 | Outside of County | 0 | 42,176 | 23,721 | 5,013 | 508 | 1,352 | 297 | 1,649 | 25.6 |
| 77.00 | Outside of County | 0 | 160,532 | 79,023 | 34,071 | 1,155 | 2,810 | 1,659 | 4,469 | 35.9 |
| 78.00 | Outside of County | 0 | 88,858 | 0 | 23,882 | 0 | 0 | 1,567 | 1,567 | 56.7 |
| 79.00 | Outside of County | 0 | 971 | 0 | 0 | 0 | 0 | 20 | 20 | 48.6 |
| 80.00 | Outside of County | 0 | 50,636 | 0 | 23,931 | 0 | 0 | 1,410 | 1,410 | 35.9 |
| 81.00 | Outside of County | 0 | 160,628 | 0 | 83,068 | 0 | 0 | 4,951 | 4,951 | 32.4 |
| 82.00 | Outside of County | 0 | 56,271 | 0 | 29,838 | 0 | 0 | 1,787 | 1,787 | 31.5 |
| 83.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 84.00 | Outside of County | 0 | 64,935 | 48,607 | 6,599 | 1,226 | 2,817 | 405 | 3,222 | 20.2 |
| 85.00 | Outside of County | 0 | 71,715 | 60,548 | 4,739 | 1,295 | 3,246 | 253 | 3,499 | 20.5 |
| 86.00 | Outside of County | 0 | 111,986 | 74,912 | 11,544 | 1,968 | 4,487 | 754 | 5,241 | 21.4 |
| 87.00 | Outside of County | 0 | 102,508 | 66,622 | 12,953 | 2,114 | 4,344 | 800 | 5,144 | 19.9 |
| 88.00 | Outside of County | 0 | 86,778 | 48,055 | 11,980 | 1,099 | 2,679 | 762 | 3,441 | 25.2 |
| 89.00 | Outside of County | 0 | 11,255 | 0 | 4,682 | 0 | 0 | 293 | 293 | 38.4 |
| 90.00 | Outside of County | 0 | 53,226 | 0 | 10,922 | 0 | 0 | 592 | 592 | 89.9 |
| 91.00 | Outside of County | 0 | 123,481 | 16,293 | 50,210 | 383 | 961 | 4,100 | 5,061 | 24.4 |
| 92.00 | Outside of County | 0 | 59,947 | 56,565 | 3,275 | 1,139 | 2,709 | 141 | 2,850 | 21.0 |
| 93.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 94.00 | Outside of County | 0 | 432 | 480 | 9 | 6 | 15 | 0 | 15 | 28.8 |
| 95.00 | Outside of County | 0 | 924 | 0 | 440 | 0 | 0 | 27 | 27 | 34.2 |
| 96.00 | Outside of County | 0 | 343 | 0 | 174 | 0 | 0 | 12 | 12 | 28.6 |
| 97.00 | Outside of County | 0 | 110 | 103 | 2 | 2 | 4 | 0 | 4 | 27.5 |
| 98.00 | Outside of County | 0 | 75,981 | 352 | 27,272 | 10 | 25 | 2,289 | 2,314 | 32.8 |
| 99.00 | Outside of County | 0 | 49,798 | 27,047 | 11,872 | 791 | 1,944 | 958 | 2,902 | 17.2 |
| 100.00 | Outside of County | 0 | 6,021 | 7,034 | 128 | 84 | 203 | 0 | 203 | 29.6 |
| 101.00 | Outside of County | 0 | 12,099 | 0 | 6,018 | 0 | 0 | 320 | 320 | 37.8 |
| 102.00 | Outside of County | 0 | 6,000 | 5,243 | 996 | 51 | 153 | 53 | 206 | 29.1 |
| 103.00 | Outside of County | 0 | 58,984 | 68,339 | 1,381 | 910 | 2,200 | 0 | 2,200 | 26.8 |
| 104.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 105.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 106.00 | Outside of County | 0 | 2,868 | 0 | 1,439 | 0 | 0 | 70 | 70 | 41.0 |
| 107.00 | Outside of County | 0 | 86,625 | 0 | 45,771 | 0 | 0 | 3,135 | 3,135 | 27.6 |
| 108.00 | Outside of County | 0 | 437 | 0 | 202 | 0 | 0 | 15 | 15 | 29.1 |
| 109.00 | Outside of County | 0 | 18,922 | 0 | 4,255 | 0 | 0 | 238 | 238 | 79.5 |
| 110.00 | Outside of County | 0 | 63,976 | 8,774 | 28,943 | 205 | 426 | 1,610 | 2,036 | 31.4 |
| 111.00 | Outside of County | 0 | 136,717 | 12,325 | 24,963 | 350 | 728 | 1,151 | 1,879 | 72.8 |
| 112.00 | Outside of County | 0 | 195,988 | 38,217 | 41,788 | 747 | 1,946 | 2,117 | 4,063 | 48.2 |
| 113.00 | Outside of County | 0 | 88,904 | 0 | 47,000 | 0 | 0 | 4,022 | 4,022 | 22.1 |
| 114.00 | Outside of County | 0 | 40,814 | 30,283 | 7,763 | 770 | 1,950 | 660 | 2,610 | 15.6 |
| 115.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 116.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 117.00 | Outside of County | 0 | 87,124 | 32,807 | 23,801 | 401 | 1,031 | 1,492 | 2,523 | 34.5 |
| 118.00 | Outside of County | 0 | 89,463 | 81,373 | 3,775 | 2,313 | 5,898 | 187 | 6,085 | 14.7 |
| 119.00 | Outside of County | 0 | 171,753 | 7,945 | 75,523 | 214 | 522 | 6,545 | 7,067 | 24.3 |
| 120.00 | Outside of County | 0 | 203,382 | 0 | 58,569 | 0 | 0 | 4,131 | 4,131 | 49.2 |
| 121.00 | Outside of County | 0 | 166,199 | 57,288 | 22,361 | 1,642 | 4,261 | 1,724 | 5,985 | 27.8 |
| 122.00 | Outside of County | 0 | 67,095 | 20,235 | 12,428 | 619 | 1,530 | 1,071 | 2,601 | 25.8 |
| 123.00 | Outside of County | 0 | 52,834 | 7,535 | 10,726 | 200 | 529 | 855 | 1,384 | 38.2 |
| 124.00 | Outside of County | 0 | 80,923 | 55,078 | 5,562 | 1,240 | 2,628 | 328 | 2,956 | 27.4 |

***VMT Summary by Jurisdiction - 2018 Baseline Scenario***

| TAZ | Community Region | In the City of Placerville (1=Yes, 0=N | Total OD VMT | Home-based PA VMT | Home-Based Work PA VMT | Households | Population | Employement | Service Population | Total OD VMT per Service Population |
|---|---|---|---|---|---|---|---|---|---|---|
| 125.00 | Outside of County | 0 | 59,993 | 10,940 | 9,293 | 389 | 801 | 781 | 1,582 | 37.9 |
| 126.00 | Outside of County | 0 | 15,688 | 4,356 | 1,784 | 136 | 279 | 129 | 408 | 38.4 |
| 127.00 | Outside of County | 0 | 38,513 | 34,433 | 2,025 | 800 | 1,693 | 117 | 1,810 | 21.3 |
| 128.00 | Outside of County | 0 | 85,653 | 40,306 | 11,052 | 999 | 2,062 | 767 | 2,829 | 30.3 |
| 129.00 | Outside of County | 0 | 42,715 | 46,640 | 819 | 994 | 2,246 | 0 | 2,246 | 19.0 |
| 130.00 | Outside of County | 0 | 31,447 | 10,020 | 4,065 | 369 | 740 | 416 | 1,156 | 27.2 |
| 131.00 | Outside of County | 0 | 75,374 | 20,584 | 13,616 | 607 | 1,234 | 1,278 | 2,512 | 30.0 |
| 132.00 | Outside of County | 0 | 33,903 | 20,607 | 3,968 | 407 | 894 | 260 | 1,154 | 29.4 |
| 133.00 | Outside of County | 0 | 132,673 | 63,999 | 14,735 | 2,087 | 5,211 | 1,475 | 6,686 | 19.8 |
| 134.00 | Outside of County | 0 | 70,311 | 32,120 | 18,482 | 1,075 | 2,460 | 1,492 | 3,952 | 17.8 |
| 135.00 | Outside of County | 0 | 43,514 | 0 | 23,772 | 0 | 0 | 2,114 | 2,114 | 20.6 |
| 136.00 | Outside of County | 0 | 31,862 | 28,679 | 1,647 | 669 | 1,669 | 82 | 1,751 | 18.2 |
| 137.00 | Outside of County | 0 | 138,587 | 104,455 | 9,379 | 2,349 | 6,735 | 673 | 7,408 | 18.7 |
| 138.00 | El Dorado Diamond Springs | 0 | 5,531 | 5,338 | 430 | 161 | 367 | 25 | 392 | 14.1 |
| 139.00 | El Dorado Diamond Springs | 0 | 3,994 | 1,768 | 670 | 62 | 135 | 55 | 190 | 21.0 |
| 140.00 | El Dorado Diamond Springs | 0 | 24,371 | 265 | 5,033 | 10 | 27 | 383 | 410 | 59.4 |
| 141.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,082 | 1,974 | 80 | 21 | 49 | 2 | 51 | 41.0 |
| 142.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 7,364 | 7,976 | 178 | 157 | 353 | 0 | 353 | 20.9 |
| 143.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,601 | 3,742 | 133 | 93 | 209 | 4 | 213 | 16.9 |
| 144.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,896 | 4,004 | 290 | 74 | 186 | 19 | 205 | 19.0 |
| 145.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 802 | 837 | 22 | 30 | 69 | 0 | 69 | 11.7 |
| 146.00 | El Dorado Diamond Springs | 0 | 3,810 | 1,778 | 632 | 64 | 145 | 51 | 196 | 19.5 |
| 147.00 | El Dorado Diamond Springs | 0 | 4,298 | 4,544 | 135 | 159 | 359 | 0 | 359 | 12.0 |
| 148.00 | Outside of County | 0 | 189,218 | 257,141 | 6,738 | 2,250 | 5,293 | 137 | 5,430 | 34.8 |
| 149.00 | Shingle Springs | 0 | 6,891 | 1,697 | 1,466 | 37 | 98 | 112 | 210 | 32.8 |
| 150.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 7,722 | 8,487 | 225 | 109 | 260 | 3 | 263 | 29.4 |
| 151.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,453 | 2,003 | 20 | 23 | 67 | 0 | 67 | 21.6 |
| 152.00 | Shingle Springs | 0 | 9,916 | 6,134 | 1,454 | 122 | 315 | 99 | 414 | 24.0 |
| 153.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 6,431 | 6,651 | 217 | 178 | 388 | 5 | 393 | 16.4 |
| 154.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,340 | 3,259 | 235 | 84 | 196 | 16 | 212 | 15.7 |
| 155.00 | Shingle Springs | 0 | 2,686 | 3,144 | 57 | 62 | 161 | 0 | 161 | 16.6 |
| 156.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,329 | 2,755 | 39 | 27 | 67 | 0 | 67 | 34.6 |
| 157.00 | El Dorado Hills | 0 | 11,314 | 14,582 | 188 | 274 | 807 | 0 | 807 | 14.0 |
| 158.00 | Cameron Park | 0 | 22,047 | 24,487 | 1,060 | 598 | 1,373 | 72 | 1,445 | 15.3 |
| 159.00 | Cameron Park | 0 | 12,635 | 16,235 | 239 | 340 | 878 | 1 | 879 | 14.4 |
| 160.00 | Shingle Springs | 0 | 7,853 | 9,562 | 164 | 194 | 501 | 0 | 501 | 15.7 |
| 161.00 | El Dorado Hills | 0 | 6,106 | 7,825 | 93 | 105 | 283 | 0 | 283 | 21.6 |
| 162.00 | El Dorado Hills | 0 | 71,569 | 99,177 | 978 | 1,503 | 4,414 | 0 | 4,414 | 16.2 |
| 163.00 | El Dorado Hills | 0 | 350 | 364 | 39 | 7 | 21 | 4 | 25 | 14.2 |
| 164.00 | El Dorado Hills | 0 | 27,784 | 0 | 14,365 | 0 | 0 | 1,232 | 1,232 | 22.6 |
| 165.00 | El Dorado Hills | 0 | 16,363 | 19,623 | 373 | 373 | 997 | 0 | 997 | 16.4 |
| 166.00 | Outside of County | 0 | 41,447 | 42,198 | 1,373 | 749 | 1,892 | 49 | 1,941 | 21.4 |
| 167.00 | El Dorado Hills | 0 | 50,123 | 52,254 | 2,138 | 1,297 | 2,904 | 55 | 2,959 | 16.9 |
| 168.00 | El Dorado Hills | 0 | 30,546 | 36,220 | 944 | 1,125 | 2,519 | 9 | 2,528 | 12.1 |
| 169.00 | El Dorado Hills | 0 | 102,894 | 154 | 21,197 | 0 | 0 | 1,688 | 1,688 | 61.0 |
| 170.00 | El Dorado Hills | 0 | 27,560 | 0 | 15,243 | 0 | 0 | 1,357 | 1,357 | 20.3 |
| 171.00 | El Dorado Hills | 0 | 14,234 | 12,753 | 758 | 441 | 790 | 20 | 810 | 17.6 |
| 172.00 | El Dorado Hills | 0 | 8,204 | 0 | 1,963 | 0 | 0 | 168 | 168 | 48.8 |
| 173.00 | El Dorado Hills | 0 | 29,687 | 0 | 6,376 | 0 | 0 | 547 | 547 | 54.3 |
| 174.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,218 | 1,539 | 249 | 15 | 37 | 11 | 48 | 45.9 |
| 175.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 955 | 876 | 97 | 11 | 26 | 5 | 31 | 30.6 |
| 176.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,048 | 2,324 | 41 | 29 | 69 | 0 | 69 | 29.6 |
| 177.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 827 | 702 | 119 | 10 | 25 | 7 | 32 | 25.9 |
| 178.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,085 | 2,421 | 40 | 30 | 77 | 0 | 77 | 27.0 |
| 179.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 10 | 17 | 0 | 1 | 3 | 0 | 3 | 3.7 |
| 180.00 | El Dorado Hills | 0 | 3,243 | 3,924 | 54 | 58 | 149 | 0 | 149 | 21.7 |
| 181.00 | El Dorado Hills | 0 | 1,418 | 8 | 645 | 1 | 3 | 58 | 61 | 23.4 |
| 182.00 | Cameron Park | 0 | 51,882 | 68,033 | 795 | 1,186 | 3,202 | 0 | 3,202 | 16.2 |
| 183.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 6,525 | 7,645 | 127 | 152 | 355 | 0 | 355 | 18.4 |
| 184.00 | Cameron Park | 0 | 28,763 | 20,492 | 3,325 | 357 | 964 | 300 | 1,264 | 22.8 |
| 185.00 | Cameron Park | 0 | 5,401 | 6,636 | 94 | 149 | 342 | 0 | 342 | 15.8 |
| 186.00 | Cameron Park | 0 | 647 | 102 | 236 | 3 | 7 | 28 | 35 | 18.5 |

***VMT Summary by Jurisdiction - 2018 Baseline Scenario***

| TAZ | Community Region | In the City of Placerville (1=Yes, 0=N | Total OD VMT | Home-based PA VMT | Home-Based Work PA VMT | Households | Population | Employement | Service Population | Total OD VMT per Service Population |
|---|---|---|---|---|---|---|---|---|---|---|
| 187.00 | Cameron Park | 0 | 10,281 | 9,793 | 1,023 | 239 | 549 | 85 | 634 | 16.2 |
| 188.00 | Cameron Park | 0 | 7,327 | 7,048 | 803 | 188 | 432 | 69 | 501 | 14.6 |
| 189.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,895 | 3,688 | 44 | 37 | 104 | 0 | 104 | 28.0 |
| 190.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 11,290 | 14,830 | 175 | 237 | 663 | 0 | 663 | 17.0 |
| 191.00 | El Dorado Hills | 0 | 824 | 1,100 | 11 | 19 | 53 | 0 | 53 | 15.5 |
| 192.00 | El Dorado Hills | 0 | 1,093 | 1,444 | 15 | 25 | 70 | 0 | 70 | 15.7 |
| 193.00 | El Dorado Hills | 0 | 8,893 | 4,380 | 2,565 | 100 | 253 | 246 | 499 | 17.8 |
| 194.00 | El Dorado Hills | 0 | 18,209 | 23,760 | 280 | 439 | 1,285 | 0 | 1,285 | 14.2 |
| 195.00 | El Dorado Hills | 0 | 1,605 | 531 | 184 | 10 | 26 | 14 | 40 | 40.6 |
| 196.00 | Outside of County | 0 | 45,981 | 51,299 | 1,506 | 923 | 2,503 | 82 | 2,585 | 17.8 |
| 197.00 | El Dorado Hills | 0 | 3,954 | 4,957 | 65 | 86 | 219 | 0 | 219 | 18.0 |
| 198.00 | El Dorado Hills | 0 | 58,474 | 46,936 | 4,592 | 887 | 2,482 | 453 | 2,935 | 19.9 |
| 199.00 | El Dorado Hills | 0 | 11,088 | 3,692 | 1,539 | 62 | 173 | 120 | 293 | 37.8 |
| 200.00 | El Dorado Hills | 0 | 3,335 | 333 | 740 | 7 | 18 | 67 | 85 | 39.3 |
| 201.00 | El Dorado Hills | 0 | 13,472 | 8,479 | 2,757 | 150 | 439 | 301 | 740 | 18.2 |
| 202.00 | El Dorado Hills | 0 | 41,829 | 41,531 | 2,356 | 737 | 2,062 | 199 | 2,261 | 18.5 |
| 203.00 | El Dorado Hills | 0 | 52,615 | 66,781 | 1,839 | 1,043 | 3,061 | 139 | 3,200 | 16.4 |
| 204.00 | El Dorado Hills | 0 | 18,761 | 20,036 | 597 | 362 | 1,067 | 41 | 1,108 | 16.9 |
| 205.00 | El Dorado Hills | 0 | 628 | 0 | 288 | 0 | 0 | 30 | 30 | 20.9 |
| 206.00 | El Dorado Hills | 0 | 2,124 | 2,756 | 30 | 52 | 153 | 0 | 153 | 13.9 |
| 207.00 | El Dorado Hills | 0 | 15,051 | 19,923 | 231 | 296 | 869 | 0 | 869 | 17.3 |
| 208.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 412 | 558 | 5 | 9 | 26 | 0 | 26 | 15.6 |
| 209.00 | El Dorado Hills | 0 | 2,999 | 3,557 | 172 | 55 | 161 | 14 | 175 | 17.1 |
| 210.00 | El Dorado Hills | 0 | 5,743 | 7,581 | 87 | 125 | 366 | 0 | 366 | 15.7 |
| 211.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 167 | 231 | 2 | 4 | 11 | 0 | 11 | 15.0 |
| 212.00 | El Dorado Hills | 0 | 1,871 | 2,523 | 25 | 35 | 103 | 0 | 103 | 18.2 |
| 213.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 6,812 | 8,992 | 101 | 116 | 323 | 0 | 323 | 21.1 |
| 214.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 686 | 922 | 10 | 8 | 19 | 0 | 19 | 35.4 |
| 215.00 | El Dorado Hills | 0 | 6,138 | 8,031 | 95 | 113 | 316 | 0 | 316 | 19.4 |
| 216.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 400 | 520 | 5 | 5 | 12 | 0 | 12 | 33.1 |
| 217.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 740 | 957 | 10 | 11 | 31 | 0 | 31 | 24.0 |
| 218.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,723 | 2,237 | 25 | 28 | 78 | 0 | 78 | 22.0 |
| 219.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,456 | 2,399 | 1,004 | 28 | 78 | 77 | 155 | 28.8 |
| 220.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 581 | 762 | 8 | 9 | 25 | 0 | 25 | 23.2 |
| 221.00 | El Dorado Hills | 0 | 43,247 | 59,070 | 587 | 876 | 2,359 | 0 | 2,359 | 18.3 |
| 222.00 | Cameron Park | 0 | 2,699 | 1,423 | 256 | 26 | 71 | 26 | 97 | 28.0 |
| 223.00 | Cameron Park | 0 | 4,072 | 5,524 | 52 | 103 | 279 | 0 | 279 | 14.6 |
| 224.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,457 | 6,394 | 348 | 95 | 258 | 29 | 287 | 19.0 |
| 225.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 11,249 | 7,664 | 978 | 92 | 270 | 79 | 349 | 32.2 |
| 226.00 | Cameron Park | 0 | 10,028 | 8,755 | 771 | 131 | 384 | 76 | 460 | 21.8 |
| 227.00 | Cameron Park | 0 | 182 | 177 | 13 | 5 | 12 | 2 | 14 | 12.9 |
| 228.00 | Cameron Park | 0 | 23,398 | 31,104 | 509 | 705 | 1,703 | 20 | 1,723 | 13.6 |
| 229.00 | El Dorado Hills | 0 | 405 | 556 | 4 | 9 | 24 | 0 | 24 | 16.7 |
| 230.00 | El Dorado Hills | 0 | 590 | 809 | 6 | 12 | 35 | 0 | 35 | 16.7 |
| 231.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,019 | 332 | 239 | 5 | 15 | 28 | 43 | 23.9 |
| 232.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,109 | 2,821 | 28 | 33 | 92 | 0 | 92 | 23.0 |
| 233.00 | Cameron Park | 0 | 6,653 | 3,846 | 768 | 92 | 211 | 101 | 312 | 21.3 |
| 234.00 | Cameron Park | 0 | 47,144 | 41,546 | 4,548 | 1,004 | 2,306 | 587 | 2,893 | 16.3 |
| 235.00 | Cameron Park | 0 | 33,832 | 44,754 | 479 | 861 | 2,214 | 0 | 2,214 | 15.3 |
| 236.00 | Cameron Park | 0 | 17,939 | 24,296 | 298 | 468 | 1,204 | 9 | 1,213 | 14.8 |
| 237.00 | Cameron Park | 0 | 2,846 | 3,551 | 47 | 75 | 172 | 0 | 172 | 16.5 |
| 238.00 | Cameron Park | 0 | 15,143 | 13,696 | 2,017 | 280 | 676 | 199 | 875 | 17.3 |
| 239.00 | Cameron Park | 0 | 1,950 | 1,618 | 135 | 32 | 87 | 16 | 103 | 19.0 |
| 240.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 7,287 | 9,730 | 107 | 127 | 345 | 0 | 345 | 21.1 |
| 241.00 | Cameron Park | 0 | 6,848 | 9,117 | 105 | 164 | 445 | 2 | 447 | 15.3 |
| 242.00 | Cameron Park | 0 | 806 | 1,102 | 9 | 22 | 60 | 0 | 60 | 13.5 |
| 243.00 | Cameron Park | 0 | 2,409 | 2,931 | 120 | 52 | 141 | 13 | 154 | 15.6 |
| 244.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,391 | 1,801 | 23 | 22 | 57 | 0 | 57 | 24.6 |
| 245.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 842 | 1,066 | 11 | 10 | 29 | 0 | 29 | 29.1 |
| 246.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,452 | 6,056 | 59 | 63 | 182 | 0 | 182 | 24.4 |
| 247.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 14,550 | 16,665 | 351 | 296 | 646 | 0 | 646 | 22.5 |
| 248.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 10,727 | 13,056 | 226 | 185 | 441 | 0 | 441 | 24.3 |

***VMT Summary by Jurisdiction - 2018 Baseline Scenario***

| TAZ | Community Region | In the City of Placerville (1=Yes, 0=N | Total OD VMT | Home-based PA VMT | Home-Based Work PA VMT | Households | Population | Employement | Service Population | Total OD VMT per Service Population |
|---|---|---|---|---|---|---|---|---|---|---|
| 249.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,911 | 2,086 | 39 | 27 | 59 | 0 | 59 | 32.4 |
| 250.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,223 | 3,854 | 63 | 53 | 123 | 0 | 123 | 26.2 |
| 251.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,465 | 5,223 | 91 | 88 | 224 | 0 | 224 | 20.0 |
| 252.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 20,232 | 24,935 | 422 | 434 | 1,130 | 0 | 1,130 | 17.9 |
| 253.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 8,637 | 10,809 | 166 | 147 | 403 | 0 | 403 | 21.4 |
| 254.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 6,155 | 7,315 | 128 | 116 | 295 | 0 | 295 | 20.9 |
| 255.00 | Cameron Park | 0 | 17,028 | 0 | 5,087 | 0 | 0 | 426 | 426 | 40.0 |
| 256.00 | Cameron Park | 0 | 46,408 | 1,915 | 13,815 | 47 | 121 | 1,042 | 1,163 | 39.9 |
| 257.00 | Shingle Springs | 0 | 30,259 | 6,774 | 11,179 | 153 | 389 | 960 | 1,349 | 22.4 |
| 258.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,485 | 1,749 | 51 | 21 | 58 | 2 | 60 | 25.0 |
| 259.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,819 | 2,262 | 31 | 30 | 78 | 0 | 78 | 23.3 |
| 260.00 | Shingle Springs | 0 | 5,677 | 58 | 1,817 | 2 | 4 | 146 | 150 | 37.7 |
| 261.00 | Shingle Springs | 0 | 15,334 | 4,173 | 3,626 | 92 | 252 | 282 | 534 | 28.7 |
| 262.00 | Shingle Springs | 0 | 12,901 | 4,871 | 3,014 | 121 | 308 | 238 | 546 | 23.6 |
| 263.00 | Shingle Springs | 0 | 6,135 | 4,995 | 534 | 108 | 296 | 35 | 331 | 18.5 |
| 264.00 | Shingle Springs | 0 | 4,761 | 2,290 | 629 | 50 | 137 | 45 | 182 | 26.2 |
| 265.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,408 | 2,965 | 44 | 45 | 117 | 0 | 117 | 20.6 |
| 266.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,362 | 2,170 | 117 | 42 | 92 | 4 | 96 | 24.7 |
| 267.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,496 | 6,891 | 127 | 129 | 336 | 0 | 336 | 16.4 |
| 268.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,278 | 3,761 | 133 | 69 | 180 | 6 | 186 | 17.7 |
| 269.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 9,325 | 10,939 | 228 | 204 | 516 | 1 | 517 | 18.0 |
| 270.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,473 | 3,221 | 42 | 44 | 113 | 0 | 113 | 21.8 |
| 271.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 8,088 | 10,053 | 199 | 150 | 379 | 5 | 384 | 21.0 |
| 272.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 6,800 | 7,760 | 363 | 131 | 347 | 23 | 370 | 18.4 |
| 273.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 7,904 | 10,189 | 255 | 134 | 391 | 12 | 403 | 19.6 |
| 274.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 15,445 | 13,859 | 1,331 | 233 | 618 | 99 | 717 | 21.6 |
| 275.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 15,495 | 18,287 | 458 | 321 | 828 | 13 | 841 | 18.4 |
| 276.00 | Cameron Park | 0 | 9,014 | 10,844 | 268 | 224 | 541 | 12 | 553 | 16.3 |
| 277.00 | Cameron Park | 0 | 6,258 | 7,932 | 106 | 161 | 416 | 0 | 416 | 15.1 |
| 278.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,210 | 6,797 | 84 | 91 | 247 | 0 | 247 | 21.1 |
| 279.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,678 | 3,507 | 42 | 45 | 122 | 0 | 122 | 21.9 |
| 280.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,778 | 2,200 | 33 | 37 | 98 | 0 | 98 | 18.1 |
| 281.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,869 | 3,572 | 543 | 59 | 156 | 36 | 192 | 20.1 |
| 282.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,747 | 2,152 | 33 | 39 | 103 | 0 | 103 | 16.9 |
| 283.00 | Shingle Springs | 0 | 16,088 | 3,776 | 2,073 | 0 | 0 | 161 | 161 | 99.9 |
| 284.00 | Shingle Springs | 0 | 1,621 | 1,091 | 305 | 25 | 65 | 25 | 90 | 18.1 |
| 285.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,130 | 1,491 | 887 | 12 | 26 | 66 | 92 | 55.5 |
| 286.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,776 | 2,318 | 29 | 36 | 95 | 0 | 95 | 18.6 |
| 287.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,717 | 2,179 | 29 | 34 | 88 | 0 | 88 | 19.6 |
| 288.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,632 | 3,324 | 46 | 51 | 135 | 0 | 135 | 19.5 |
| 289.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 360 | 514 | 4 | 8 | 23 | 0 | 23 | 15.4 |
| 290.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,416 | 3,228 | 37 | 44 | 129 | 0 | 129 | 18.8 |
| 291.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 9,922 | 12,933 | 181 | 188 | 463 | 0 | 463 | 21.4 |
| 292.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,576 | 6,311 | 64 | 72 | 210 | 0 | 210 | 21.8 |
| 293.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,230 | 1,276 | 32 | 34 | 77 | 0 | 77 | 15.9 |
| 294.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,021 | 4,645 | 94 | 97 | 247 | 0 | 247 | 16.3 |
| 295.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 148,908 | 5,014 | 26,719 | 110 | 284 | 1,491 | 1,775 | 83.9 |
| 296.00 | El Dorado Diamond Springs | 0 | 9,633 | 6,665 | 855 | 117 | 305 | 56 | 361 | 26.7 |
| 297.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,430 | 3,140 | 57 | 70 | 182 | 0 | 182 | 13.3 |
| 298.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,313 | 3,810 | 75 | 79 | 206 | 0 | 206 | 16.1 |
| 299.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,090 | 6,062 | 106 | 106 | 268 | 0 | 268 | 19.0 |
| 300.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,197 | 1,390 | 26 | 28 | 71 | 0 | 71 | 16.9 |
| 301.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 2 | 0.1 |
| 302.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,967 | 2,475 | 500 | 57 | 130 | 33 | 163 | 24.4 |
| 303.00 | El Dorado Diamond Springs | 0 | 3,470 | 3,661 | 91 | 106 | 231 | 0 | 231 | 15.0 |
| 304.00 | El Dorado Diamond Springs | 0 | 6,356 | 379 | 2,386 | 12 | 27 | 224 | 251 | 25.3 |
| 305.00 | El Dorado Diamond Springs | 0 | 7,603 | 0 | 3,158 | 1 | 2 | 283 | 285 | 26.7 |
| 306.00 | El Dorado Diamond Springs | 0 | 1,629 | 375 | 629 | 10 | 22 | 55 | 77 | 21.2 |
| 307.00 | El Dorado Diamond Springs | 0 | 617 | 494 | 38 | 16 | 36 | 2 | 38 | 16.2 |
| 308.00 | El Dorado Diamond Springs | 0 | 272 | 273 | 15 | 11 | 25 | 1 | 26 | 10.5 |
| 309.00 | El Dorado Diamond Springs | 0 | 533 | 434 | 52 | 14 | 32 | 4 | 36 | 14.8 |
| 310.00 | El Dorado Diamond Springs | 0 | 4,146 | 794 | 1,294 | 26 | 59 | 122 | 181 | 22.9 |

***VMT Summary by Jurisdiction - 2018 Baseline Scenario***

| TAZ | Community Region | In the City of Placerville (1=Yes, 0=N | Total OD VMT | Home-based PA VMT | Home-Based Work PA VMT | Households | Population | Employement | Service Population | Total OD VMT per Service Population |
|---|---|---|---|---|---|---|---|---|---|---|
| 311.00 | El Dorado Diamond Springs | 0 | 8,533 | 1,197 | 2,120 | 38 | 87 | 158 | 245 | 34.9 |
| 312.00 | El Dorado Diamond Springs | 0 | 870 | 891 | 49 | 31 | 70 | 3 | 73 | 11.9 |
| 313.00 | El Dorado Diamond Springs | 0 | 23,390 | 4,175 | 6,912 | 38 | 99 | 506 | 605 | 38.7 |
| 314.00 | El Dorado Diamond Springs | 0 | 2,981 | 3,093 | 154 | 81 | 206 | 8 | 214 | 13.9 |
| 315.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 316.00 | El Dorado Diamond Springs | 0 | 342 | 346 | 9 | 13 | 30 | 0 | 30 | 11.5 |
| 317.00 | El Dorado Diamond Springs | 0 | 206 | 210 | 5 | 8 | 18 | 0 | 18 | 11.3 |
| 318.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,322 | 4,680 | 137 | 128 | 326 | 2 | 328 | 13.2 |
| 319.00 | El Dorado Diamond Springs | 0 | 1,220 | 1,220 | 91 | 38 | 99 | 6 | 105 | 11.6 |
| 320.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,096 | 2,179 | 537 | 18 | 44 | 39 | 83 | 61.1 |
| 321.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,291 | 6,703 | 102 | 104 | 256 | 0 | 256 | 20.6 |
| 322.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 7,460 | 8,020 | 553 | 153 | 387 | 33 | 420 | 17.8 |
| 323.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,846 | 3,454 | 85 | 51 | 129 | 4 | 133 | 21.4 |
| 324.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,638 | 4,777 | 61 | 64 | 165 | 0 | 165 | 22.1 |
| 325.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 706 | 878 | 14 | 16 | 39 | 0 | 39 | 17.9 |
| 326.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,171 | 2,731 | 54 | 49 | 121 | 1 | 122 | 17.8 |
| 327.00 | Placerville | 0 | 1,704 | 2,003 | 39 | 40 | 101 | 0 | 101 | 16.9 |
| 328.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 847 | 998 | 18 | 19 | 48 | 0 | 48 | 17.7 |
| 329.00 | Placerville | 0 | 4,862 | 5,451 | 124 | 139 | 317 | 0 | 317 | 15.3 |
| 330.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,701 | 3,124 | 65 | 73 | 184 | 0 | 184 | 14.7 |
| 331.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,824 | 7,134 | 116 | 110 | 274 | 0 | 274 | 21.3 |
| 332.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,541 | 1,805 | 36 | 47 | 104 | 0 | 104 | 14.8 |
| 333.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,529 | 5,675 | 86 | 91 | 226 | 0 | 226 | 20.1 |
| 334.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,809 | 1,175 | 1,315 | 26 | 58 | 110 | 168 | 22.7 |
| 335.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,013 | 3,285 | 124 | 77 | 165 | 5 | 170 | 17.7 |
| 336.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,225 | 1,475 | 25 | 30 | 70 | 0 | 70 | 17.4 |
| 337.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 9,197 | 7,630 | 869 | 121 | 302 | 62 | 364 | 25.3 |
| 338.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 14,133 | 17,909 | 370 | 322 | 831 | 14 | 845 | 16.7 |
| 339.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 8,581 | 12,365 | 118 | 188 | 410 | 0 | 410 | 20.9 |
| 340.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 6,896 | 8,586 | 224 | 93 | 205 | 14 | 219 | 31.5 |
| 341.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,489 | 1,918 | 86 | 31 | 71 | 8 | 79 | 18.9 |
| 342.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,620 | 3,271 | 48 | 48 | 124 | 0 | 124 | 21.2 |
| 343.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,485 | 4,097 | 63 | 53 | 116 | 0 | 116 | 30.1 |
| 344.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,762 | 4,481 | 68 | 55 | 120 | 0 | 120 | 31.3 |
| 345.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,796 | 1,949 | 35 | 29 | 63 | 0 | 63 | 28.4 |
| 346.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,272 | 1,399 | 24 | 22 | 49 | 0 | 49 | 25.7 |
| 347.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,911 | 3,675 | 48 | 42 | 108 | 0 | 108 | 26.9 |
| 348.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,799 | 2,993 | 63 | 49 | 110 | 0 | 110 | 25.4 |
| 349.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 6,297 | 8,014 | 252 | 83 | 191 | 18 | 209 | 30.1 |
| 350.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,179 | 1,682 | 17 | 22 | 48 | 0 | 48 | 24.5 |
| 351.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,305 | 1,880 | 16 | 23 | 50 | 0 | 50 | 26.0 |
| 352.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,857 | 2,624 | 24 | 29 | 63 | 0 | 63 | 29.3 |
| 353.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 9,027 | 13,265 | 99 | 167 | 365 | 1 | 366 | 24.7 |
| 354.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,501 | 3,517 | 746 | 53 | 116 | 77 | 193 | 28.5 |
| 355.00 | Placerville | 1 | 14,292 | 6,555 | 2,957 | 241 | 550 | 244 | 794 | 18.0 |
| 356.00 | Placerville | 1 | 2,499 | 2,652 | 73 | 91 | 195 | 0 | 195 | 12.8 |
| 357.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,889 | 3,827 | 367 | 89 | 209 | 21 | 230 | 21.3 |
| 358.00 | Placerville | 0 | 5,870 | 2,945 | 1,187 | 81 | 190 | 98 | 288 | 20.4 |
| 359.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,285 | 5,085 | 93 | 105 | 254 | 0 | 254 | 16.9 |
| 360.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,338 | 5,780 | 239 | 98 | 237 | 10 | 247 | 21.6 |
| 361.00 | Placerville | 1 | 17,728 | 10,267 | 4,156 | 458 | 938 | 392 | 1,330 | 13.3 |
| 362.00 | Placerville | 1 | 46,119 | 5,945 | 10,928 | 252 | 591 | 876 | 1,467 | 31.4 |
| 363.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 327 | 343 | 9 | 13 | 31 | 0 | 31 | 10.6 |
| 364.00 | Placerville | 0 | 4,044 | 3,540 | 416 | 138 | 328 | 30 | 358 | 11.3 |
| 365.00 | El Dorado Diamond Springs | 0 | 10,889 | 8,653 | 1,046 | 322 | 722 | 71 | 793 | 13.7 |
| 366.00 | El Dorado Diamond Springs | 0 | 380 | 274 | 42 | 15 | 31 | 4 | 35 | 10.8 |
| 367.00 | El Dorado Diamond Springs | 0 | 4,054 | 0 | 1,960 | 0 | 0 | 197 | 197 | 20.6 |
| 368.00 | El Dorado Diamond Springs | 0 | 1,589 | 1,730 | 48 | 68 | 149 | 0 | 149 | 10.7 |
| 369.00 | El Dorado Diamond Springs | 0 | 5,670 | 5,750 | 283 | 228 | 507 | 13 | 520 | 10.9 |
| 370.00 | El Dorado Diamond Springs | 0 | 6,432 | 0 | 3,038 | 0 | 0 | 303 | 303 | 21.2 |
| 371.00 | El Dorado Diamond Springs | 0 | 740 | 795 | 18 | 21 | 47 | 0 | 47 | 15.9 |
| 372.00 | El Dorado Diamond Springs | 0 | 16,774 | 7,739 | 2,417 | 195 | 433 | 211 | 644 | 26.0 |

***VMT Summary by Jurisdiction - 2018 Baseline Scenario***

| TAZ | Community Region | In the City of Placerville (1=Yes, 0=N | Total OD VMT | Home-based PA VMT | Home-Based Work PA VMT | Households | Population | Employement | Service Population | Total OD VMT per Service Population |
|---|---|---|---|---|---|---|---|---|---|---|
| 373.00 | El Dorado Diamond Springs | 0 | 652 | 643 | 19 | 26 | 59 | 0 | 59 | 11.1 |
| 374.00 | El Dorado Diamond Springs | 0 | 414 | 329 | 29 | 13 | 28 | 2 | 30 | 13.6 |
| 375.00 | El Dorado Diamond Springs | 0 | 368 | 368 | 10 | 14 | 32 | 0 | 32 | 11.7 |
| 376.00 | El Dorado Diamond Springs | 0 | 973 | 935 | 57 | 34 | 77 | 3 | 80 | 12.2 |
| 377.00 | El Dorado Diamond Springs | 0 | 561 | 329 | 157 | 13 | 29 | 14 | 43 | 12.9 |
| 378.00 | El Dorado Diamond Springs | 0 | 667 | 652 | 19 | 27 | 59 | 0 | 59 | 11.3 |
| 379.00 | El Dorado Diamond Springs | 0 | 1,102 | 1,113 | 31 | 48 | 105 | 0 | 105 | 10.5 |
| 380.00 | El Dorado Diamond Springs | 0 | 256 | 245 | 7 | 12 | 26 | 0 | 26 | 9.7 |
| 381.00 | El Dorado Diamond Springs | 0 | 158 | 143 | 5 | 7 | 15 | 0 | 15 | 10.3 |
| 382.00 | El Dorado Diamond Springs | 0 | 261 | 239 | 8 | 11 | 24 | 0 | 24 | 10.8 |
| 383.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,591 | 1,742 | 40 | 46 | 102 | 0 | 102 | 15.6 |
| 384.00 | El Dorado Diamond Springs | 0 | 3,654 | 3,970 | 95 | 120 | 267 | 0 | 267 | 13.7 |
| 385.00 | El Dorado Diamond Springs | 0 | 11,717 | 13,659 | 337 | 451 | 1,002 | 0 | 1,002 | 11.7 |
| 386.00 | El Dorado Diamond Springs | 0 | 2,657 | 2,922 | 67 | 90 | 200 | 0 | 200 | 13.3 |
| 387.00 | El Dorado Diamond Springs | 0 | 1,172 | 929 | 107 | 36 | 80 | 8 | 88 | 13.3 |
| 388.00 | El Dorado Diamond Springs | 0 | 6,359 | 0 | 3,067 | 0 | 0 | 303 | 303 | 21.0 |
| 389.00 | El Dorado Diamond Springs | 0 | 6,129 | 11 | 2,616 | 2 | 4 | 264 | 268 | 22.8 |
| 390.00 | El Dorado Diamond Springs | 0 | 4,307 | 3,894 | 359 | 182 | 379 | 23 | 402 | 10.7 |
| 391.00 | El Dorado Diamond Springs | 0 | 2,173 | 196 | 547 | 11 | 23 | 54 | 77 | 28.3 |
| 392.00 | El Dorado Diamond Springs | 0 | 671 | 600 | 23 | 28 | 58 | 0 | 58 | 11.5 |
| 393.00 | El Dorado Diamond Springs | 0 | 9,002 | 6,354 | 1,004 | 268 | 605 | 68 | 673 | 13.4 |
| 394.00 | El Dorado Diamond Springs | 0 | 186 | 202 | 5 | 8 | 22 | 0 | 22 | 8.5 |
| 395.00 | Placerville | 1 | 62,226 | 1,584 | 26,085 | 74 | 166 | 2,253 | 2,419 | 25.7 |
| 396.00 | El Dorado Diamond Springs | 0 | 28,140 | 0 | 5,846 | 0 | 0 | 439 | 439 | 64.1 |
| 397.00 | El Dorado Diamond Springs | 0 | 1,329 | 1,264 | 69 | 50 | 114 | 3 | 117 | 11.4 |
| 398.00 | El Dorado Diamond Springs | 0 | 413 | 322 | 38 | 14 | 32 | 3 | 35 | 11.9 |
| 399.00 | El Dorado Diamond Springs | 0 | 1,126 | 1,133 | 32 | 43 | 97 | 0 | 97 | 11.6 |
| 400.00 | El Dorado Diamond Springs | 0 | 313 | 262 | 11 | 16 | 33 | 0 | 33 | 9.4 |
| 401.00 | Placerville | 0 | 8,987 | 658 | 2,628 | 28 | 63 | 213 | 276 | 32.6 |
| 402.00 | El Dorado Diamond Springs | 0 | 3,541 | 1,448 | 1,078 | 51 | 133 | 106 | 239 | 14.8 |
| 403.00 | El Dorado Diamond Springs | 0 | 23,814 | 3,632 | 7,792 | 124 | 258 | 654 | 912 | 26.1 |
| 404.00 | El Dorado Diamond Springs | 0 | 1,343 | 409 | 459 | 19 | 42 | 49 | 91 | 14.8 |
| 405.00 | El Dorado Diamond Springs | 0 | 169 | 150 | 5 | 9 | 20 | 0 | 20 | 8.6 |
| 406.00 | El Dorado Diamond Springs | 0 | 18,956 | 553 | 3,787 | 24 | 53 | 286 | 339 | 56.0 |
| 407.00 | El Dorado Diamond Springs | 0 | 9,540 | 18 | 3,373 | 1 | 2 | 309 | 311 | 30.7 |
| 408.00 | El Dorado Diamond Springs | 0 | 4,167 | 22 | 1,742 | 1 | 2 | 182 | 184 | 22.6 |
| 409.00 | Placerville | 0 | 18,695 | 3,018 | 5,656 | 104 | 248 | 445 | 693 | 27.0 |
| 410.00 | El Dorado Diamond Springs | 0 | 24,455 | 14,637 | 3,607 | 426 | 1,031 | 277 | 1,308 | 18.7 |
| 411.00 | Placerville | 1 | 50,523 | 6,155 | 13,292 | 298 | 712 | 1,271 | 1,983 | 25.5 |
| 412.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,967 | 3,203 | 79 | 86 | 206 | 0 | 206 | 14.4 |
| 413.00 | Placerville | 0 | 3,607 | 3,787 | 102 | 126 | 301 | 0 | 301 | 12.0 |
| 414.00 | El Dorado Diamond Springs | 0 | 2,618 | 129 | 1,180 | 7 | 15 | 120 | 135 | 19.5 |
| 415.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 434 | 442 | 12 | 18 | 40 | 0 | 40 | 10.7 |
| 416.00 | El Dorado Diamond Springs | 0 | 148 | 145 | 4 | 9 | 19 | 0 | 19 | 7.9 |
| 417.00 | Placerville | 1 | 9,685 | 1,098 | 2,868 | 45 | 114 | 278 | 392 | 24.7 |
| 418.00 | Placerville | 1 | 3,170 | 0 | 673 | 0 | 0 | 64 | 64 | 49.5 |
| 419.00 | Placerville | 1 | 3,283 | 0 | 844 | 0 | 0 | 85 | 85 | 38.6 |
| 420.00 | Placerville | 1 | 1,760 | 957 | 498 | 42 | 100 | 52 | 152 | 11.5 |
| 421.00 | Placerville | 1 | 1,662 | 1,578 | 97 | 68 | 163 | 5 | 168 | 9.9 |
| 422.00 | Placerville | 1 | 52,703 | 6,323 | 24,673 | 278 | 652 | 1,907 | 2,559 | 20.6 |
| 423.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 460 | 482 | 12 | 20 | 48 | 0 | 48 | 9.6 |
| 424.00 | Placerville | 0 | 10,237 | 4,839 | 2,517 | 171 | 391 | 228 | 619 | 16.6 |
| 425.00 | Placerville | 0 | 52,855 | 32,203 | 5,947 | 1,167 | 2,617 | 563 | 3,180 | 16.6 |
| 426.00 | Placerville | 0 | 859 | 990 | 19 | 33 | 82 | 0 | 82 | 10.5 |
| 427.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,962 | 4,548 | 92 | 93 | 232 | 0 | 232 | 17.1 |
| 428.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 643 | 741 | 15 | 22 | 55 | 0 | 55 | 11.7 |
| 429.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,310 | 1,650 | 34 | 35 | 83 | 0 | 83 | 15.9 |
| 430.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,529 | 2,476 | 178 | 58 | 137 | 10 | 147 | 17.2 |
| 431.00 | Placerville | 1 | 1,794 | 471 | 655 | 22 | 45 | 60 | 105 | 17.1 |
| 432.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 15,284 | 10,519 | 2,696 | 309 | 729 | 229 | 958 | 16.0 |
| 433.00 | Placerville | 1 | 10,428 | 9,659 | 707 | 481 | 1,041 | 36 | 1,077 | 9.7 |
| 434.00 | Placerville | 1 | 673 | 587 | 23 | 33 | 71 | 0 | 71 | 9.5 |

***VMT Summary by Jurisdiction - 2018 Baseline Scenario***

| TAZ | Community Region | In the City of Placerville (1=Yes, 0=N | Total OD VMT | Home-based PA VMT | Home-Based Work PA VMT | Households | Population | Employement | Service Population | Total OD VMT per Service Population |
|---|---|---|---|---|---|---|---|---|---|---|
| 435.00 | Placerville | 1 | 1,186 | 645 | 243 | 36 | 77 | 27 | 104 | 11.4 |
| 436.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 970 | 1,150 | 20 | 25 | 62 | 0 | 62 | 15.6 |
| 437.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,377 | 5,676 | 248 | 117 | 287 | 12 | 299 | 18.0 |
| 438.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,578 | 5,269 | 232 | 124 | 278 | 11 | 289 | 19.3 |
| 439.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,421 | 6,310 | 172 | 156 | 350 | 3 | 353 | 15.4 |
| 440.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,394 | 1,100 | 177 | 28 | 63 | 15 | 78 | 17.9 |
| 441.00 | Placerville | 1 | 362 | 377 | 9 | 12 | 29 | 0 | 29 | 12.6 |
| 442.00 | Placerville | 1 | 13,108 | 10,677 | 1,035 | 313 | 768 | 69 | 837 | 15.7 |
| 443.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,458 | 1,567 | 36 | 38 | 85 | 0 | 85 | 17.1 |
| 444.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 200 | 220 | 5 | 8 | 19 | 0 | 19 | 10.4 |
| 445.00 | Placerville | 0 | 1,044 | 902 | 151 | 23 | 56 | 11 | 67 | 15.5 |
| 446.00 | Placerville | 1 | 1,761 | 851 | 247 | 25 | 59 | 19 | 78 | 22.7 |
| 447.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,244 | 3,964 | 67 | 76 | 189 | 0 | 189 | 17.1 |
| 448.00 | Placerville | 0 | 1,803 | 2,094 | 74 | 53 | 130 | 4 | 134 | 13.5 |
| 449.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 540 | 573 | 14 | 14 | 30 | 0 | 30 | 18.0 |
| 450.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,267 | 2,678 | 392 | 84 | 180 | 31 | 211 | 15.5 |
| 451.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 980 | 1,034 | 25 | 27 | 58 | 0 | 58 | 16.9 |
| 452.00 | Placerville | 0 | 6,274 | 4,034 | 500 | 121 | 259 | 33 | 292 | 21.5 |
| 453.00 | Placerville | 1 | 2,919 | 3,086 | 120 | 145 | 310 | 1 | 311 | 9.4 |
| 454.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 567 | 544 | 18 | 25 | 54 | 0 | 54 | 10.6 |
| 455.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,712 | 3,062 | 67 | 73 | 172 | 0 | 172 | 15.8 |
| 456.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,880 | 2,061 | 48 | 51 | 109 | 0 | 109 | 17.2 |
| 457.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,808 | 3,060 | 129 | 62 | 137 | 5 | 142 | 19.8 |
| 458.00 | Placerville | 0 | 2,940 | 2,602 | 343 | 67 | 157 | 26 | 183 | 16.0 |
| 459.00 | Placerville | 0 | 309 | 353 | 7 | 11 | 26 | 0 | 26 | 12.0 |
| 460.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,457 | 966 | 264 | 22 | 47 | 20 | 67 | 21.7 |
| 461.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,567 | 222 | 616 | 6 | 14 | 59 | 73 | 21.4 |
| 462.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,224 | 1,278 | 1,752 | 31 | 66 | 125 | 191 | 27.3 |
| 463.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,473 | 7,256 | 39 | 85 | 194 | 0 | 194 | 23.0 |
| 464.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,526 | 3,312 | 39 | 47 | 104 | 0 | 104 | 24.4 |
| 465.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,956 | 5,701 | 114 | 58 | 134 | 16 | 150 | 26.4 |
| 466.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,542 | 4,418 | 201 | 61 | 139 | 22 | 161 | 22.0 |
| 467.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,484 | 3,848 | 23 | 39 | 89 | 0 | 89 | 27.9 |
| 468.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 6,778 | 9,766 | 125 | 120 | 277 | 6 | 283 | 24.0 |
| 469.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,092 | 5,682 | 136 | 59 | 131 | 15 | 146 | 28.1 |
| 470.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,031 | 3,078 | 27 | 32 | 73 | 1 | 74 | 27.4 |
| 471.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,477 | 2,039 | 54 | 23 | 53 | 6 | 59 | 25.2 |
| 472.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,953 | 2,297 | 146 | 26 | 59 | 20 | 79 | 24.6 |
| 473.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 602 | 576 | 30 | 10 | 23 | 2 | 25 | 24.1 |
| 474.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,692 | 2,178 | 28 | 37 | 81 | 0 | 81 | 20.9 |
| 475.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,797 | 2,384 | 27 | 38 | 83 | 0 | 83 | 21.7 |
| 476.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 859 | 1,123 | 12 | 16 | 41 | 0 | 41 | 20.8 |
| 477.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,038 | 2,558 | 124 | 30 | 69 | 15 | 84 | 24.2 |
| 478.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,481 | 1,914 | 24 | 30 | 66 | 0 | 66 | 22.5 |
| 479.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,068 | 3,155 | 440 | 51 | 118 | 37 | 155 | 26.3 |
| 480.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,298 | 1,999 | 13 | 20 | 46 | 0 | 46 | 28.4 |
| 481.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,335 | 2,030 | 15 | 20 | 44 | 0 | 44 | 30.4 |
| 482.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,633 | 7,942 | 92 | 74 | 163 | 3 | 166 | 34.0 |
| 483.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,435 | 5,257 | 173 | 115 | 249 | 9 | 258 | 17.2 |
| 484.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 6,755 | 5,646 | 945 | 91 | 227 | 114 | 341 | 19.8 |
| 485.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,058 | 1,522 | 11 | 15 | 37 | 0 | 37 | 28.3 |
| 486.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,063 | 5,882 | 47 | 69 | 156 | 0 | 156 | 26.1 |
| 487.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 11,817 | 11,343 | 739 | 221 | 519 | 36 | 555 | 21.3 |
| 488.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,531 | 7,566 | 86 | 107 | 242 | 0 | 242 | 22.9 |
| 489.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 6,881 | 7,088 | 660 | 133 | 300 | 58 | 358 | 19.2 |
| 490.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,174 | 1,529 | 19 | 24 | 60 | 0 | 60 | 19.6 |
| 491.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 7,374 | 9,114 | 177 | 160 | 399 | 3 | 402 | 18.3 |
| 492.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,053 | 4,473 | 408 | 71 | 176 | 31 | 207 | 24.4 |
| 493.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,090 | 4,560 | 369 | 72 | 178 | 26 | 204 | 24.9 |
| 494.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,256 | 3,963 | 138 | 68 | 170 | 10 | 180 | 18.1 |
| 495.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 652 | 851 | 11 | 16 | 40 | 0 | 40 | 16.4 |
| 496.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 7,363 | 4,566 | 830 | 81 | 201 | 67 | 268 | 27.5 |

***VMT Summary by Jurisdiction - 2018 Baseline Scenario***

| TAZ | Community Region | In the City of Placerville (1=Yes, 0=N | Total OD VMT | Home-based PA VMT | Home-Based Work PA VMT | Households | Population | Employement | Service Population | Total OD VMT per Service Population |
|---|---|---|---|---|---|---|---|---|---|---|
| 497.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,324 | 5,722 | 101 | 88 | 224 | 3 | 227 | 19.0 |
| 498.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,446 | 4,471 | 104 | 70 | 158 | 6 | 164 | 21.0 |
| 499.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,340 | 1,788 | 22 | 30 | 75 | 0 | 75 | 17.9 |
| 500.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,091 | 1,341 | 603 | 11 | 26 | 51 | 77 | 53.3 |
| 501.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,805 | 1,018 | 768 | 22 | 49 | 83 | 132 | 21.3 |
| 502.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 7,007 | 7,684 | 351 | 117 | 272 | 18 | 290 | 24.2 |
| 503.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,159 | 0 | 1,010 | 1 | 2 | 76 | 78 | 53.2 |
| 504.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 6,094 | 6,503 | 344 | 141 | 313 | 19 | 332 | 18.4 |
| 505.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 73 | 86 | 1 | 3 | 7 | 0 | 7 | 11.0 |
| 506.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,026 | 1,245 | 22 | 28 | 62 | 0 | 62 | 16.5 |
| 507.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,748 | 2,382 | 392 | 50 | 116 | 37 | 153 | 17.9 |
| 508.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 6,688 | 3,507 | 1,838 | 85 | 184 | 186 | 370 | 18.1 |
| 509.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 392 | 428 | 22 | 12 | 27 | 2 | 29 | 13.7 |
| 510.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,230 | 3,509 | 157 | 92 | 199 | 10 | 209 | 15.5 |
| 511.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,738 | 1,886 | 359 | 45 | 105 | 33 | 138 | 19.9 |
| 512.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,833 | 1,982 | 367 | 37 | 86 | 27 | 113 | 25.1 |
| 513.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 7,428 | 10,752 | 84 | 142 | 354 | 0 | 354 | 21.0 |
| 514.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 31,897 | 46,989 | 311 | 622 | 1,551 | 0 | 1,551 | 20.6 |
| 515.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,604 | 4,785 | 105 | 69 | 176 | 8 | 184 | 19.6 |
| 516.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 8,117 | 11,779 | 87 | 142 | 362 | 0 | 362 | 22.4 |
| 517.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 18,953 | 21,253 | 1,114 | 388 | 857 | 101 | 958 | 19.8 |
| 518.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 11,917 | 15,759 | 307 | 289 | 671 | 17 | 688 | 17.3 |
| 519.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,880 | 7,837 | 191 | 142 | 330 | 12 | 342 | 17.2 |
| 520.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 11,943 | 16,149 | 268 | 266 | 617 | 12 | 629 | 19.0 |
| 521.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 10,860 | 13,145 | 581 | 290 | 641 | 60 | 701 | 15.5 |
| 522.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,096 | 7,230 | 64 | 85 | 221 | 0 | 221 | 23.1 |
| 523.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 16,440 | 10,403 | 1,911 | 240 | 588 | 206 | 794 | 20.7 |
| 524.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 14,687 | 12,653 | 1,114 | 205 | 490 | 103 | 593 | 24.8 |
| 525.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,887 | 7,158 | 44 | 85 | 199 | 0 | 199 | 24.5 |
| 526.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 245 | 336 | 3 | 5 | 12 | 0 | 12 | 20.1 |
| 527.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 7,769 | 9,527 | 361 | 162 | 380 | 38 | 418 | 18.6 |
| 528.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 59,936 | 84,546 | 793 | 1,001 | 2,429 | 72 | 2,501 | 24.0 |
| 529.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 918 | 1,150 | 13 | 15 | 36 | 0 | 36 | 25.3 |
| 530.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 12,922 | 17,323 | 192 | 191 | 462 | 0 | 462 | 28.0 |
| 531.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,524 | 3,389 | 35 | 34 | 82 | 0 | 82 | 30.7 |
| 532.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,996 | 5,157 | 59 | 61 | 147 | 0 | 147 | 27.1 |
| 533.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 9,310 | 8,574 | 645 | 105 | 271 | 34 | 305 | 30.5 |
| 534.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,782 | 4,952 | 52 | 53 | 128 | 0 | 128 | 29.5 |
| 535.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,931 | 7,811 | 74 | 91 | 221 | 0 | 221 | 26.8 |
| 536.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,088 | 6,583 | 64 | 82 | 200 | 0 | 200 | 25.5 |
| 537.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 10,390 | 14,148 | 106 | 165 | 402 | 0 | 402 | 25.9 |
| 538.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,965 | 3,049 | 304 | 44 | 107 | 22 | 129 | 30.8 |
| 539.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 12,990 | 1,298 | 2,075 | 6 | 15 | 166 | 181 | 72.0 |
| 540.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,856 | 0 | 572 | 0 | 0 | 53 | 53 | 53.9 |
| 541.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,050 | 1,118 | 61 | 18 | 42 | 6 | 48 | 21.8 |
| 542.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,610 | 3,094 | 413 | 52 | 123 | 37 | 160 | 22.6 |
| 543.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 10,542 | 2,434 | 1,775 | 49 | 114 | 107 | 221 | 47.6 |
| 544.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 679 | 496 | 104 | 9 | 21 | 8 | 29 | 23.4 |
| 545.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,521 | 2,046 | 16 | 23 | 54 | 0 | 54 | 28.3 |
| 546.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,811 | 6,428 | 54 | 61 | 143 | 0 | 143 | 33.8 |
| 547.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,019 | 523 | 481 | 10 | 23 | 46 | 69 | 57.9 |
| 548.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 17,475 | 23,311 | 467 | 386 | 910 | 22 | 932 | 18.7 |
| 549.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,160 | 2,718 | 39 | 42 | 99 | 0 | 99 | 21.8 |
| 550.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 265 | 347 | 4 | 7 | 18 | 0 | 18 | 14.7 |
| 551.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,421 | 2,524 | 783 | 41 | 105 | 54 | 159 | 34.0 |
| 552.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,436 | 423 | 500 | 8 | 19 | 32 | 51 | 48.0 |
| 553.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,568 | 2,058 | 26 | 32 | 75 | 0 | 75 | 21.0 |
| 554.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,047 | 5,248 | 105 | 83 | 194 | 4 | 198 | 20.4 |
| 555.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,654 | 2,238 | 24 | 34 | 80 | 0 | 80 | 20.6 |
| 556.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,091 | 6,971 | 66 | 82 | 192 | 0 | 192 | 26.6 |
| 557.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,694 | 2,093 | 31 | 35 | 82 | 1 | 83 | 20.5 |
| 558.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,716 | 2,988 | 163 | 36 | 84 | 19 | 103 | 26.3 |

***VMT Summary by Jurisdiction - 2018 Baseline Scenario***

| TAZ | Community Region | In the City of Placerville (1=Yes, 0=N | Total OD VMT | Home-based PA VMT | Home-Based Work PA VMT | Households | Population | Employement | Service Population | Total OD VMT per Service Population |
|---|---|---|---|---|---|---|---|---|---|---|
| 559.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,381 | 1,831 | 17 | 25 | 59 | 0 | 59 | 23.6 |
| 560.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,604 | 1,673 | 100 | 27 | 63 | 10 | 73 | 21.9 |
| 561.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,182 | 1,578 | 18 | 22 | 52 | 0 | 52 | 22.7 |
| 562.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,016 | 5,900 | 39 | 62 | 145 | 0 | 145 | 27.6 |
| 563.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,211 | 3,362 | 17 | 32 | 71 | 0 | 71 | 31.3 |
| 564.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 620 | 834 | 10 | 14 | 33 | 0 | 33 | 18.5 |
| 565.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,632 | 3,669 | 38 | 56 | 129 | 0 | 129 | 20.4 |
| 566.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,996 | 5,387 | 70 | 93 | 220 | 1 | 221 | 18.1 |
| 567.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 671 | 816 | 25 | 18 | 42 | 2 | 44 | 15.4 |
| 568.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 931 | 1,259 | 14 | 26 | 62 | 0 | 62 | 15.1 |
| 569.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,705 | 2,852 | 298 | 61 | 144 | 31 | 175 | 21.1 |
| 570.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,738 | 2,119 | 775 | 40 | 92 | 92 | 184 | 25.7 |
| 571.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,371 | 1,843 | 22 | 33 | 76 | 0 | 76 | 18.0 |
| 572.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,867 | 1,377 | 262 | 25 | 61 | 34 | 95 | 19.6 |
| 573.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 6,504 | 7,840 | 121 | 89 | 197 | 2 | 199 | 32.7 |
| 574.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,059 | 8,006 | 30 | 71 | 174 | 0 | 174 | 29.1 |
| 575.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,777 | 4,117 | 16 | 29 | 71 | 0 | 71 | 39.1 |
| 576.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,093 | 1,543 | 16 | 19 | 42 | 1 | 43 | 25.4 |
| 577.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 753 | 1,117 | 7 | 13 | 29 | 0 | 29 | 26.2 |
| 578.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 23,468 | 37,261 | 106 | 370 | 817 | 0 | 817 | 28.7 |
| 579.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,788 | 5,279 | 100 | 38 | 96 | 12 | 108 | 34.9 |
| 580.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,893 | 4,142 | 62 | 35 | 89 | 5 | 94 | 30.8 |
| 581.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,278 | 5,106 | 291 | 43 | 95 | 32 | 127 | 33.8 |
| 582.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,258 | 1,708 | 16 | 13 | 34 | 0 | 34 | 37.2 |
| 583.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 27,736 | 43,328 | 212 | 352 | 774 | 10 | 784 | 35.4 |
| 584.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,736 | 2,097 | 55 | 18 | 40 | 3 | 43 | 40.7 |
| 585.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 9,569 | 14,366 | 78 | 124 | 273 | 0 | 273 | 35.1 |
| 586.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,837 | 2,525 | 1,555 | 51 | 91 | 92 | 183 | 32.0 |
| 587.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,277 | 3,414 | 17 | 39 | 99 | 0 | 99 | 22.9 |
| 588.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 19,726 | 30,121 | 125 | 323 | 805 | 0 | 805 | 24.5 |
| 589.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 393 | 627 | 2 | 3 | 12 | 0 | 12 | 32.7 |
| 590.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 830 | 1,145 | 12 | 18 | 46 | 0 | 46 | 18.2 |
| 591.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 86 | 122 | 1 | 3 | 8 | 0 | 8 | 11.3 |
| 592.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 12,714 | 13,276 | 739 | 339 | 749 | 91 | 840 | 15.1 |
| 593.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 6,940 | 9,089 | 265 | 151 | 382 | 28 | 410 | 16.9 |
| 594.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 16,945 | 24,780 | 182 | 312 | 790 | 5 | 795 | 21.3 |
| 595.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,939 | 1,825 | 265 | 25 | 56 | 31 | 87 | 22.2 |
| 596.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,829 | 2,777 | 221 | 34 | 85 | 25 | 110 | 25.8 |
| 597.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 11,029 | 4,036 | 1,914 | 106 | 234 | 278 | 512 | 21.5 |
| 598.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,719 | 544 | 259 | 14 | 31 | 35 | 66 | 26.1 |
| 599.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 712 | 969 | 11 | 17 | 38 | 0 | 38 | 18.9 |
| 600.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 11,268 | 11,074 | 1,266 | 205 | 453 | 130 | 583 | 19.3 |
| 601.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,338 | 1,903 | 4 | 10 | 22 | 0 | 22 | 60.9 |
| 602.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 433 | 137 | 53 | 3 | 5 | 2 | 7 | 59.0 |
| 603.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 906 | 729 | 84 | 11 | 20 | 2 | 22 | 42.0 |
| 604.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,419 | 1,776 | 109 | 17 | 33 | 3 | 36 | 39.3 |
| 605.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,653 | 1,766 | 86 | 18 | 38 | 2 | 40 | 41.3 |
| 606.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 607.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,530 | 4,854 | 12 | 19 | 49 | 0 | 49 | 71.5 |
| 608.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 6 | 0 | 0 | 1 | 2 | 0 | 2 | 2.9 |
| 609.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 3,028 | 3,208 | 117 | 34 | 72 | 4 | 76 | 40.0 |
| 610.00 | El Dorado Hills | 0 | 38,894 | 185 | 20,450 | 0 | 0 | 1,745 | 1,745 | 22.3 |
| 611.00 | El Dorado Hills | 0 | 315 | 0 | 10 | 153 | 0 | 1 | 1 | 315.1 |
| 612.00 | El Dorado Hills | 0 | 79,244 | 0 | 44,405 | 0 | 0 | 3,121 | 3,121 | 25.4 |
| 613.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 71 | 67 | 1 | 2 | 5 | 0 | 5 | 13.8 |
| 614.00 | El Dorado Hills | 0 | 5,951 | 7,036 | 115 | 150 | 383 | 0 | 383 | 15.6 |
| 615.00 | El Dorado Hills | 0 | 12,122 | 9,014 | 1,032 | 150 | 402 | 75 | 477 | 25.4 |
| 616.00 | El Dorado Hills | 0 | 1,374 | 1,639 | 25 | 37 | 94 | 0 | 94 | 14.7 |
| 617.00 | El Dorado Hills | 0 | 20,608 | 12,689 | 1,251 | 187 | 547 | 118 | 665 | 31.0 |
| 618.00 | El Dorado Hills | 0 | 3,136 | 0 | 1,248 | 0 | 0 | 146 | 146 | 21.5 |
| 619.00 | El Dorado Hills | 0 | 3,458 | 0 | 1,252 | 0 | 0 | 151 | 151 | 22.9 |
| 620.00 | El Dorado Hills | 0 | 17,790 | 3,464 | 1,776 | 0 | 0 | 188 | 188 | 94.6 |

***VMT Summary by Jurisdiction - 2018 Baseline Scenario***

| TAZ | Community Region | In the City of Placerville (1=Yes, 0=N | Total OD VMT | Home-based PA VMT | Home-Based Work PA VMT | Households | Population | Employement | Service Population | Total OD VMT per Service Population |
|---|---|---|---|---|---|---|---|---|---|---|
| 621.00 | El Dorado Hills | 0 | 14,299 | 18,797 | 223 | 327 | 957 | 0 | 957 | 14.9 |
| 622.00 | El Dorado Hills | 0 | 21,947 | 21,514 | 1,625 | 370 | 1,083 | 147 | 1,230 | 17.8 |
| 623.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 393 | 0 | 173 | 0 | 0 | 16 | 16 | 24.5 |
| 624.00 | El Dorado Hills | 0 | 15,659 | 17,550 | 1,193 | 308 | 905 | 96 | 1,001 | 15.7 |
| 625.00 | El Dorado Hills | 0 | 861 | 0 | 418 | 0 | 0 | 40 | 40 | 21.5 |
| 626.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 8,700 | 7,509 | 1,120 | 164 | 383 | 98 | 481 | 18.1 |
| 627.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 54,214 | 0 | 11,337 | 0 | 0 | 897 | 897 | 60.4 |
| 628.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 629.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 630.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 631.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 632.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,446 | 1,742 | 25 | 37 | 94 | 0 | 94 | 15.4 |
| 633.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 6,287 | 7,481 | 122 | 150 | 379 | 0 | 379 | 16.6 |
| 634.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 6,451 | 7,748 | 122 | 150 | 379 | 0 | 379 | 17.0 |
| 635.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,874 | 5,840 | 92 | 113 | 286 | 0 | 286 | 17.0 |
| 636.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 4,366 | 6,094 | 81 | 120 | 322 | 0 | 322 | 13.6 |
| 637.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 8,062 | 9,923 | 140 | 171 | 458 | 0 | 458 | 17.6 |
| 638.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,037 | 1,266 | 16 | 23 | 62 | 0 | 62 | 16.8 |
| 639.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,263 | 2,810 | 36 | 46 | 123 | 0 | 123 | 18.4 |
| 640.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 7,666 | 9,534 | 125 | 176 | 472 | 0 | 472 | 16.2 |
| 641.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,088 | 2,601 | 33 | 46 | 123 | 0 | 123 | 16.9 |
| 642.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 28,454 | 33,516 | 1,269 | 637 | 1,708 | 93 | 1,801 | 15.8 |
| 643.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 9,822 | 12,118 | 163 | 216 | 579 | 0 | 579 | 17.0 |
| 644.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 2,922 | 3,676 | 47 | 76 | 194 | 0 | 194 | 15.1 |
| 645.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 21,198 | 24,639 | 949 | 415 | 1,059 | 51 | 1,110 | 19.1 |
| 646.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 8,819 | 11,040 | 154 | 192 | 490 | 0 | 490 | 18.0 |
| 647.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,587 | 1,896 | 69 | 38 | 97 | 6 | 103 | 15.4 |
| 648.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 1,814 | 2,169 | 46 | 38 | 97 | 2 | 99 | 18.3 |
| 649.00 | Unincorporated El Dorado County (Remainder Area) | 0 | 5,510 | 3,117 | 31 | 38 | 97 | 0 | 97 | 56.8 |
| 650.00 | Outside of County | 0 | 3,018,017 | 1,487,652 | 470,023 | 0 | 0 | 0 | 0 | - |
| 651.00 | Outside of County | 0 | 28,430 | 14,325 | 4,161 | 0 | 0 | 0 | 0 | - |
| 652.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 653.00 | Outside of County | 0 | 391,601 | 159,733 | 51,129 | 0 | 0 | 0 | 0 | - |
| 654.00 | Outside of County | 0 | 56,157 | 9,082 | 2,855 | 0 | 0 | 0 | 0 | - |
| 655.00 | Outside of County | 0 | 269,259 | 107,794 | 35,163 | 0 | 0 | 0 | 0 | - |
| 656.00 | Outside of County | 0 | 76,873 | 18,147 | 8,671 | 0 | 0 | 0 | 0 | - |
| 657.00 | Outside of County | 0 | 186,257 | 8,193 | 3,831 | 0 | 0 | 0 | 0 | - |
| 658.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 659.00 | Outside of County | 0 | 7,525 | 3,130 | 1,406 | 0 | 0 | 0 | 0 | - |
| 660.00 | Outside of County | 0 | 164,217 | 81,865 | 31,549 | 0 | 0 | 0 | 0 | - |
| 661.00 | Outside of County | 0 | 156,422 | 71,575 | 25,672 | 0 | 0 | 0 | 0 | - |
| 662.00 | Outside of County | 0 | 700,690 | 338,333 | 119,222 | 0 | 0 | 0 | 0 | - |
| 663.00 | Outside of County | 0 | 679,400 | 227,123 | 80,896 | 0 | 0 | 0 | 0 | - |
| 664.00 | Outside of County | 0 | 347,429 | 190,135 | 54,774 | 0 | 0 | 0 | 0 | - |
| 665.00 | Outside of County | 0 | 199,364 | 79,618 | 30,980 | 0 | 0 | 0 | 0 | - |
| 666.00 | Outside of County | 0 | 88,161 | 45,079 | 14,335 | 0 | 0 | 0 | 0 | - |
| 667.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 668.00 | Outside of County | 0 | 512,377 | 310,784 | 0 | 0 | 0 | 0 | 0 | - |
| 669.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 670.00 | Outside of County | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| 671.00 | Outside of County | 0 | 169,913 | 96,013 | 23,735 | 0 | 0 | 0 | 0 | - |
| 672.00 | Outside of County | 0 | 33,262 | 34,250 | 0 | 0 | 0 | 0 | 0 | - |
| 673.00 | Outside of County | 0 | 24,884 | 14,900 | 0 | 0 | 0 | 0 | 0 | - |
| 674.00 | Outside of County | 0 | 355,415 | 29,972 | 0 | 0 | 0 | 0 | 0 | - |

# *Appendix B*

*Generations at Green Valley (Project) Vehicle Miles Traveled (VMT) Details*

# Appendix B - Generations at Green Valley (Project) Vehicle Miles Traveled (VMT) Details

| Jurisdiction | | | Population Details | |
|---|---|---|---|---|
| | Home-based PA VMT | Home-based VMT per Capita | Total Households | Total Population |
| Generations at Green Valley | 17,810 | 19.6 | 380 | 908 |

# Appendix B - Generations at Green Valley (Project) Vehicle Miles Traveled (VMT) Details

| TAZ | Community Region | | | Population Details | |
|---|---|---|---|---|---|
| | | Home-based PA VMT | Home-based VMT per Capita | Total Households | Total Population |
| 1 | Unincorporated El Dorado County | 2,352 | 31.5 | 46 | 75 |
| 2 | Unincorporated El Dorado County | 30,923 | 26.1 | 525 | 1,185 |
| 3 | Unincorporated El Dorado County | 3,516 | 40.1 | 34 | 88 |
| 4 | Unincorporated El Dorado County | 1,420 | 42.1 | 16 | 34 |
| 5 | Unincorporated El Dorado County | 3,792 | 52.3 | 33 | 73 |
| 6 | Unincorporated El Dorado County | 15,350 | 23.8 | 270 | 646 |
| 7 | Unincorporated El Dorado County | 31,279 | 28.0 | 516 | 1,119 |
| 8 | Unincorporated El Dorado County | 743 | 20.6 | 14 | 36 |
| 9 | Unincorporated El Dorado County | 31,767 | 25.6 | 482 | 1,240 |
| 10 | Outside of County | 0 | 0.0 | 0 | 0 |
| 11 | Outside of County | 0 | 0.0 | 0 | 0 |
| 12 | Outside of County | 29,829 | 17.1 | 663 | 1,741 |
| 13 | Outside of County | 34,464 | 17.3 | 775 | 1,995 |
| 14 | Outside of County | 71,284 | 17.5 | 1,502 | 4,068 |
| 15 | Outside of County | 481 | 21.4 | 10 | 23 |
| 16 | Outside of County | 8,273 | 21.9 | 149 | 378 |
| 17 | Outside of County | 0 | 0.0 | 0 | 0 |
| 18 | Outside of County | 584 | 5.0 | 41 | 116 |
| 19 | Outside of County | 0 | 0.0 | 0 | 0 |
| 20 | Outside of County | 17 | 17.1 | 1 | 1 |
| 21 | Outside of County | 47 | 23.5 | 1 | 2 |
| 22 | Outside of County | 259 | 43.2 | 2 | 6 |
| 23 | Outside of County | 23,288 | 85.4 | 101 | 273 |
| 24 | Outside of County | 26 | 26.3 | 1 | 1 |
| 25 | Outside of County | 0 | 0.0 | 0 | 0 |
| 26 | Outside of County | 0 | 0.0 | 0 | 0 |
| 27 | Outside of County | 258 | 43.0 | 2 | 6 |
| 28 | Outside of County | 14,595 | 43.9 | 123 | 332 |
| 29 | Outside of County | 8,965 | 46.7 | 72 | 192 |
| 30 | Outside of County | 0 | 0.0 | 0 | 0 |
| 31 | Outside of County | 3,749 | 39.8 | 44 | 94 |
| 32 | Outside of County | 6,433 | 4.2 | 676 | 1,526 |
| 33 | Outside of County | 0 | 0.0 | 0 | 0 |
| 34 | Outside of County | 8,708 | 45.6 | 75 | 191 |
| 35 | Outside of County | 0 | 0.0 | 0 | 0 |
| 36 | Outside of County | 0 | 0.0 | 0 | 0 |
| 37 | Outside of County | 0 | 0.0 | 0 | 0 |
| 38 | Outside of County | 0 | 0.0 | 0 | 0 |
| 39 | Outside of County | 21,203 | 13.5 | 666 | 1,569 |
| 40 | Outside of County | 23,734 | 11.4 | 916 | 2,079 |
| 41 | Outside of County | 25,184 | 19.8 | 544 | 1,271 |
| 42 | Outside of County | 0 | 0.0 | 0 | 0 |
| 43 | Outside of County | 60,823 | 29.7 | 828 | 2,045 |
| 44 | Outside of County | 74,563 | 28.5 | 1,069 | 2,614 |
| 45 | Outside of County | 21,640 | 10.5 | 906 | 2,057 |
| 46 | Outside of County | 0 | 0.0 | 0 | 0 |
| 47 | Outside of County | 0 | 0.0 | 0 | 0 |
| 48 | Outside of County | 67,787 | 22.1 | 1,203 | 3,068 |
| 49 | Outside of County | 0 | 0.0 | 0 | 0 |
| 50 | Outside of County | 78,789 | 32.4 | 1,025 | 2,430 |
| 51 | Outside of County | 61,278 | 14.4 | 1,768 | 4,253 |
| 52 | Outside of County | 24,275 | 36.4 | 297 | 667 |
| 53 | Outside of County | 80,933 | 23.4 | 1,335 | 3,452 |
| 54 | Outside of County | 33,636 | 29.2 | 476 | 1,153 |
| 55 | Outside of County | 36,065 | 22.8 | 675 | 1,583 |
| 56 | Outside of County | 39,819 | 20.6 | 820 | 1,933 |
| 57 | Outside of County | 0 | 0.0 | 0 | 0 |
| 58 | Outside of County | 22,900 | 19.7 | 465 | 1,160 |
| 59 | Outside of County | 106 | 26.5 | 2 | 4 |
| 60 | Outside of County | 15,751 | 33.0 | 238 | 478 |
| 61 | Outside of County | 173,434 | 33.2 | 2,205 | 5,227 |
| 62 | Outside of County | 303 | 37.9 | 4 | 8 |
| 63 | Outside of County | 16,537 | 21.9 | 340 | 756 |
| 64 | Outside of County | 56,296 | 26.1 | 865 | 2,156 |
| 65 | Outside of County | 11,192 | 33.1 | 136 | 338 |
| 66 | Outside of County | 48,207 | 24.7 | 826 | 1,950 |
| 67 | Outside of County | 0 | 0.0 | 0 | 0 |
| 68 | Outside of County | 30,124 | 22.9 | 616 | 1,314 |
| 69 | Outside of County | 83,412 | 20.2 | 1,588 | 4,122 |
| 70 | Outside of County | 807 | 0.0 | 0 | 0 |
| 71 | Outside of County | 104,034 | 33.7 | 1,231 | 3,088 |
| 72 | Outside of County | 363 | 0.0 | 0 | 0 |
| 73 | Outside of County | 0 | 0.0 | 0 | 0 |
| 74 | Outside of County | 19,461 | 19.0 | 435 | 1,022 |
| 75 | Outside of County | 67,989 | 15.4 | 1,936 | 4,401 |

# Appendix B - Generations at Green Valley (Project) Vehicle Miles Traveled (VMT) Details

| TAZ | Community Region | | | Population Details | |
|---|---|---|---|---|---|
| | | Home-based PA VMT | Home-based VMT per Capita | Total Households | Total Population |
| 76 | Outside of County | 21,531 | 15.9 | 508 | 1,352 |
| 77 | Outside of County | 70,249 | 25.0 | 1,155 | 2,810 |
| 78 | Outside of County | 0 | 0.0 | 0 | 0 |
| 79 | Outside of County | 0 | 0.0 | 0 | 0 |
| 80 | Outside of County | 0 | 0.0 | 0 | 0 |
| 81 | Outside of County | 0 | 0.0 | 0 | 0 |
| 82 | Outside of County | 0 | 0.0 | 0 | 0 |
| 83 | Outside of County | 0 | 0.0 | 0 | 0 |
| 84 | Outside of County | 45,478 | 16.1 | 1,226 | 2,817 |
| 85 | Outside of County | 56,624 | 17.4 | 1,295 | 3,246 |
| 86 | Outside of County | 67,983 | 15.2 | 1,968 | 4,487 |
| 87 | Outside of County | 59,140 | 13.6 | 2,114 | 4,344 |
| 88 | Outside of County | 44,318 | 16.5 | 1,099 | 2,679 |
| 89 | Outside of County | 0 | 0.0 | 0 | 0 |
| 90 | Outside of County | 0 | 0.0 | 0 | 0 |
| 91 | Outside of County | 15,047 | 15.7 | 383 | 961 |
| 92 | Outside of County | 54,466 | 20.1 | 1,139 | 2,709 |
| 93 | Outside of County | 0 | 0.0 | 0 | 0 |
| 94 | Outside of County | 443 | 29.5 | 6 | 15 |
| 95 | Outside of County | 0 | 0.0 | 0 | 0 |
| 96 | Outside of County | 0 | 0.0 | 0 | 0 |
| 97 | Outside of County | 92 | 23.1 | 2 | 4 |
| 98 | Outside of County | 337 | 13.7 | 10 | 25 |
| 99 | Outside of County | 25,160 | 12.9 | 791 | 1,944 |
| 100 | Outside of County | 6,776 | 33.4 | 84 | 203 |
| 101 | Outside of County | 0 | 0.0 | 0 | 0 |
| 102 | Outside of County | 4,981 | 32.6 | 51 | 153 |
| 103 | Outside of County | 65,258 | 29.7 | 910 | 2,200 |
| 104 | Outside of County | 0 | 0.0 | 0 | 0 |
| 105 | Outside of County | 0 | 0.0 | 0 | 0 |
| 106 | Outside of County | 0 | 0.0 | 0 | 0 |
| 107 | Outside of County | 0 | 0.0 | 0 | 0 |
| 108 | Outside of County | 0 | 0.0 | 0 | 0 |
| 109 | Outside of County | 0 | 0.0 | 0 | 0 |
| 110 | Outside of County | 8,197 | 19.3 | 205 | 426 |
| 111 | Outside of County | 11,375 | 15.6 | 350 | 728 |
| 112 | Outside of County | 35,635 | 18.3 | 747 | 1,946 |
| 113 | Outside of County | 0 | 0.0 | 0 | 0 |
| 114 | Outside of County | 28,335 | 14.5 | 770 | 1,950 |
| 115 | Outside of County | 0 | 0.0 | 0 | 0 |
| 116 | Outside of County | 0 | 0.0 | 0 | 0 |
| 117 | Outside of County | 30,716 | 29.8 | 401 | 1,031 |
| 118 | Outside of County | 78,633 | 13.3 | 2,313 | 5,898 |
| 119 | Outside of County | 7,200 | 13.8 | 214 | 522 |
| 120 | Outside of County | 0 | 0.0 | 0 | 0 |
| 121 | Outside of County | 51,567 | 12.1 | 1,642 | 4,261 |
| 122 | Outside of County | 18,406 | 12.0 | 619 | 1,530 |
| 123 | Outside of County | 6,929 | 13.1 | 200 | 529 |
| 124 | Outside of County | 51,953 | 19.8 | 1,240 | 2,628 |
| 125 | Outside of County | 9,784 | 12.2 | 389 | 801 |
| 126 | Outside of County | 4,132 | 14.8 | 136 | 279 |
| 127 | Outside of County | 33,347 | 19.7 | 800 | 1,693 |
| 128 | Outside of County | 37,729 | 18.3 | 999 | 2,062 |
| 129 | Outside of County | 45,556 | 20.3 | 994 | 2,246 |
| 130 | Outside of County | 9,143 | 12.4 | 369 | 740 |
| 131 | Outside of County | 19,030 | 15.4 | 607 | 1,234 |
| 132 | Outside of County | 19,457 | 21.8 | 407 | 894 |
| 133 | Outside of County | 56,680 | 10.9 | 2,087 | 5,211 |
| 134 | Outside of County | 28,979 | 11.8 | 1,075 | 2,460 |
| 135 | Outside of County | 0 | 0.0 | 0 | 0 |
| 136 | Outside of County | 27,637 | 16.6 | 669 | 1,669 |
| 137 | Outside of County | 97,603 | 14.5 | 2,349 | 6,735 |
| 138 | El Dorado Diamond Springs | 5,034 | 13.7 | 161 | 367 |
| 139 | El Dorado Diamond Springs | 1,588 | 11.7 | 62 | 135 |
| 140 | El Dorado Diamond Springs | 237 | 8.7 | 10 | 27 |
| 141 | Unincorporated El Dorado County | 1,864 | 38.2 | 21 | 49 |
| 142 | Unincorporated El Dorado County | 7,496 | 21.2 | 157 | 353 |
| 143 | Unincorporated El Dorado County | 3,603 | 17.2 | 93 | 209 |
| 144 | Unincorporated El Dorado County | 3,781 | 20.3 | 74 | 186 |
| 145 | Unincorporated El Dorado County | 782 | 11.4 | 30 | 69 |
| 146 | El Dorado Diamond Springs | 1,603 | 11.1 | 64 | 145 |
| 147 | El Dorado Diamond Springs | 4,293 | 12.0 | 159 | 359 |
| 148 | Outside of County | 244,530 | 46.2 | 2,250 | 5,293 |
| 149 | Shingle Springs | 1,577 | 16.1 | 37 | 98 |
| 150 | Unincorporated El Dorado County | 8,159 | 31.4 | 109 | 260 |

# Appendix B - Generations at Green Valley (Project) Vehicle Miles Traveled (VMT) Details

| TAZ | Community Region | | | Population Details | |
|---|---|---|---|---|---|
| | | Home-based PA VMT | Home-based VMT per Capita | Total Households | Total Population |
| 151 | Unincorporated El Dorado County | 1,920 | 28.6 | 23 | 67 |
| 152 | Shingle Springs | 5,650 | 17.9 | 122 | 315 |
| 153 | Unincorporated El Dorado County | 6,416 | 16.5 | 178 | 388 |
| 154 | Unincorporated El Dorado County | 3,027 | 15.4 | 84 | 196 |
| 155 | Shingle Springs | 2,970 | 18.4 | 62 | 161 |
| 156 | Unincorporated El Dorado County | 2,575 | 38.3 | 27 | 67 |
| 157 | El Dorado Hills | 13,359 | 16.5 | 274 | 807 |
| 158 | Cameron Park | 23,186 | 16.9 | 598 | 1,373 |
| 159 | Cameron Park | 16,121 | 18.4 | 340 | 878 |
| 160 | Shingle Springs | 9,035 | 18.0 | 194 | 501 |
| 161 | El Dorado Hills | 7,479 | 26.5 | 105 | 283 |
| 162 | El Dorado Hills | 93,318 | 21.1 | 1,503 | 4,414 |
| 163 | El Dorado Hills | 330 | 16.0 | 7 | 21 |
| 164 | El Dorado Hills | 0 | 0.0 | 0 | 0 |
| 165 | El Dorado Hills | 18,479 | 18.5 | 373 | 997 |
| 166 | Outside of County | 43,376 | 22.9 | 749 | 1,892 |
| 167 | El Dorado Hills | 48,985 | 16.9 | 1,297 | 2,904 |
| 168 | El Dorado Hills | 34,920 | 13.9 | 1,125 | 2,519 |
| 169 | El Dorado Hills | 151 | 0.0 | 0 | 0 |
| 170 | El Dorado Hills | 0 | 0.0 | 0 | 0 |
| 171 | El Dorado Hills | 12,082 | 15.3 | 441 | 790 |
| 172 | El Dorado Hills | 0 | 0.0 | 0 | 0 |
| 173 | El Dorado Hills | 0 | 0.0 | 0 | 0 |
| 174 | Unincorporated El Dorado County | 1,437 | 38.4 | 15 | 37 |
| 175 | Unincorporated El Dorado County | 812 | 31.0 | 11 | 26 |
| 176 | Unincorporated El Dorado County | 2,164 | 31.3 | 29 | 69 |
| 177 | Unincorporated El Dorado County | 639 | 25.7 | 10 | 25 |
| 178 | Unincorporated El Dorado County | 2,256 | 29.2 | 30 | 77 |
| 179 | Unincorporated El Dorado County | 15 | 5.6 | 1 | 3 |
| 180 | El Dorado Hills | 3,642 | 24.4 | 58 | 149 |
| 181 | El Dorado Hills | 4 | 1.5 | 1 | 3 |
| 182 | Cameron Park | 64,291 | 20.1 | 1,186 | 3,202 |
| 183 | Unincorporated El Dorado County | 7,128 | 20.1 | 152 | 355 |
| 184 | Cameron Park | 18,666 | 19.4 | 357 | 964 |
| 185 | Cameron Park | 6,269 | 18.3 | 149 | 342 |
| 186 | Cameron Park | 90 | 13.1 | 3 | 7 |
| 187 | Cameron Park | 9,010 | 16.4 | 239 | 549 |
| 188 | Cameron Park | 6,462 | 15.0 | 188 | 432 |
| 189 | Unincorporated El Dorado County | 3,493 | 33.7 | 37 | 104 |
| 190 | Unincorporated El Dorado County | 14,108 | 21.3 | 237 | 663 |
| 191 | El Dorado Hills | 1,039 | 19.6 | 19 | 53 |
| 192 | El Dorado Hills | 1,371 | 19.7 | 25 | 70 |
| 193 | El Dorado Hills | 42,187 | 18.5 | 852 | 2,284 |
| 194 | El Dorado Hills | 21,945 | 17.1 | 439 | 1,285 |
| 195 | El Dorado Hills | 501 | 19.6 | 10 | 26 |
| 196 | Outside of County | 50,801 | 20.3 | 923 | 2,503 |
| 197 | El Dorado Hills | 4,756 | 21.7 | 86 | 219 |
| 198 | El Dorado Hills | 42,952 | 17.3 | 887 | 2,482 |
| 199 | El Dorado Hills | 3,457 | 19.9 | 62 | 173 |
| 200 | El Dorado Hills | 312 | 17.5 | 7 | 18 |
| 201 | El Dorado Hills | 7,740 | 17.6 | 150 | 439 |
| 202 | El Dorado Hills | 39,222 | 19.0 | 737 | 2,062 |
| 203 | El Dorado Hills | 63,732 | 20.8 | 1,043 | 3,061 |
| 204 | El Dorado Hills | 18,534 | 17.4 | 362 | 1,067 |
| 205 | El Dorado Hills | 0 | 0.0 | 0 | 0 |
| 206 | El Dorado Hills | 2,556 | 16.7 | 52 | 153 |
| 207 | El Dorado Hills | 19,088 | 22.0 | 296 | 869 |
| 208 | Unincorporated El Dorado County | 531 | 20.1 | 9 | 26 |
| 209 | El Dorado Hills | 3,373 | 20.9 | 55 | 161 |
| 210 | El Dorado Hills | 7,234 | 19.8 | 125 | 366 |
| 211 | Unincorporated El Dorado County | 216 | 19.4 | 4 | 11 |
| 212 | El Dorado Hills | 2,399 | 23.4 | 35 | 103 |
| 213 | Unincorporated El Dorado County | 8,543 | 26.5 | 116 | 323 |
| 214 | Unincorporated El Dorado County | 865 | 44.7 | 8 | 19 |
| 215 | El Dorado Hills | 7,622 | 24.1 | 113 | 316 |
| 216 | Unincorporated El Dorado County | 488 | 40.4 | 5 | 12 |
| 217 | Unincorporated El Dorado County | 904 | 29.4 | 11 | 31 |
| 218 | Unincorporated El Dorado County | 2,129 | 27.2 | 28 | 78 |
| 219 | Unincorporated El Dorado County | 2,265 | 29.1 | 28 | 78 |
| 220 | Unincorporated El Dorado County | 720 | 28.7 | 9 | 25 |
| 221 | El Dorado Hills | 56,168 | 23.8 | 876 | 2,359 |
| 222 | Cameron Park | 1,355 | 19.2 | 26 | 71 |
| 223 | Cameron Park | 5,332 | 19.1 | 103 | 279 |
| 224 | Unincorporated El Dorado County | 6,030 | 23.4 | 95 | 258 |
| 225 | Unincorporated El Dorado County | 7,231 | 26.8 | 92 | 270 |

# Appendix B - Generations at Green Valley (Project) Vehicle Miles Traveled (VMT) Details

| TAZ | Community Region | | | Population Details | |
|---|---|---|---|---|---|
| | | Home-based PA VMT | Home-based VMT per Capita | Total Households | Total Population |
| 226 | Cameron Park | 8,214 | 21.4 | 131 | 384 |
| 227 | Cameron Park | 162 | 13.4 | 5 | 12 |
| 228 | Cameron Park | 30,340 | 17.8 | 705 | 1,703 |
| 229 | El Dorado Hills | 511 | 21.1 | 9 | 24 |
| 230 | El Dorado Hills | 765 | 21.7 | 12 | 35 |
| 231 | Unincorporated El Dorado County | 303 | 20.7 | 5 | 15 |
| 232 | Unincorporated El Dorado County | 2,681 | 29.2 | 33 | 92 |
| 233 | Cameron Park | 3,442 | 16.3 | 92 | 211 |
| 234 | Cameron Park | 37,473 | 16.3 | 1,004 | 2,306 |
| 235 | Cameron Park | 46,107 | 18.9 | 947 | 2,436 |
| 236 | Cameron Park | 23,792 | 19.8 | 468 | 1,204 |
| 237 | Cameron Park | 3,362 | 19.5 | 75 | 172 |
| 238 | Cameron Park | 12,610 | 18.6 | 280 | 676 |
| 239 | Cameron Park | 1,487 | 17.1 | 32 | 87 |
| 240 | Unincorporated El Dorado County | 9,280 | 26.9 | 127 | 345 |
| 241 | Cameron Park | 9,000 | 20.2 | 164 | 445 |
| 242 | Cameron Park | 1,058 | 17.7 | 22 | 60 |
| 243 | Cameron Park | 2,825 | 20.0 | 52 | 141 |
| 244 | Unincorporated El Dorado County | 1,696 | 30.0 | 22 | 57 |
| 245 | Unincorporated El Dorado County | 1,009 | 34.8 | 10 | 29 |
| 246 | Unincorporated El Dorado County | 5,739 | 31.5 | 63 | 182 |
| 247 | Unincorporated El Dorado County | 15,539 | 24.1 | 296 | 646 |
| 248 | Unincorporated El Dorado County | 12,409 | 28.1 | 185 | 441 |
| 249 | Unincorporated El Dorado County | 1,914 | 32.5 | 27 | 59 |
| 250 | Unincorporated El Dorado County | 3,637 | 29.5 | 53 | 123 |
| 251 | Unincorporated El Dorado County | 4,859 | 21.7 | 88 | 224 |
| 252 | Unincorporated El Dorado County | 23,460 | 20.8 | 434 | 1,130 |
| 253 | Unincorporated El Dorado County | 10,246 | 25.4 | 147 | 403 |
| 254 | Unincorporated El Dorado County | 6,915 | 23.5 | 116 | 295 |
| 255 | Cameron Park | 0 | 0.0 | 0 | 0 |
| 256 | Cameron Park | 1,771 | 14.6 | 47 | 121 |
| 257 | Shingle Springs | 6,194 | 15.9 | 153 | 389 |
| 258 | Unincorporated El Dorado County | 1,679 | 29.2 | 21 | 58 |
| 259 | Unincorporated El Dorado County | 2,128 | 27.2 | 30 | 78 |
| 260 | Shingle Springs | 45 | 10.3 | 2 | 4 |
| 261 | Shingle Springs | 3,835 | 15.2 | 92 | 252 |
| 262 | Shingle Springs | 4,529 | 14.7 | 121 | 308 |
| 263 | Shingle Springs | 4,684 | 15.8 | 108 | 296 |
| 264 | Shingle Springs | 2,113 | 15.4 | 50 | 137 |
| 265 | Unincorporated El Dorado County | 2,780 | 23.7 | 45 | 117 |
| 266 | Unincorporated El Dorado County | 2,052 | 22.4 | 42 | 92 |
| 267 | Unincorporated El Dorado County | 6,531 | 19.4 | 129 | 336 |
| 268 | Unincorporated El Dorado County | 3,617 | 20.1 | 69 | 180 |
| 269 | Unincorporated El Dorado County | 10,854 | 21.0 | 204 | 516 |
| 270 | Unincorporated El Dorado County | 3,070 | 27.1 | 44 | 113 |
| 271 | Unincorporated El Dorado County | 9,805 | 25.9 | 150 | 379 |
| 272 | Unincorporated El Dorado County | 7,374 | 21.2 | 131 | 347 |
| 273 | Unincorporated El Dorado County | 9,895 | 25.3 | 134 | 391 |
| 274 | Unincorporated El Dorado County | 13,003 | 21.1 | 233 | 618 |
| 275 | Unincorporated El Dorado County | 17,672 | 21.3 | 321 | 828 |
| 276 | Cameron Park | 10,380 | 19.2 | 224 | 541 |
| 277 | Cameron Park | 7,548 | 18.2 | 161 | 416 |
| 278 | Unincorporated El Dorado County | 6,433 | 26.1 | 91 | 247 |
| 279 | Unincorporated El Dorado County | 3,349 | 27.4 | 45 | 122 |
| 280 | Unincorporated El Dorado County | 2,116 | 21.6 | 37 | 98 |
| 281 | Unincorporated El Dorado County | 3,306 | 21.1 | 59 | 156 |
| 282 | Unincorporated El Dorado County | 2,049 | 19.8 | 39 | 103 |
| 283 | Shingle Springs | 3,785 | 0.0 | 0 | 0 |
| 284 | Shingle Springs | 1,010 | 15.7 | 25 | 65 |
| 285 | Unincorporated El Dorado County | 1,452 | 55.0 | 12 | 26 |
| 286 | Unincorporated El Dorado County | 2,209 | 23.1 | 36 | 95 |
| 287 | Unincorporated El Dorado County | 2,074 | 23.7 | 34 | 88 |
| 288 | Unincorporated El Dorado County | 3,178 | 23.5 | 51 | 135 |
| 289 | Unincorporated El Dorado County | 488 | 20.9 | 8 | 23 |
| 290 | Unincorporated El Dorado County | 3,097 | 24.1 | 44 | 129 |
| 291 | Unincorporated El Dorado County | 12,249 | 26.4 | 188 | 463 |
| 292 | Unincorporated El Dorado County | 6,038 | 28.7 | 72 | 210 |
| 293 | Unincorporated El Dorado County | 1,189 | 15.4 | 34 | 77 |
| 294 | Unincorporated El Dorado County | 4,380 | 17.7 | 97 | 247 |
| 295 | Unincorporated El Dorado County | 4,758 | 16.8 | 110 | 284 |
| 296 | El Dorado Diamond Springs | 6,270 | 20.6 | 117 | 305 |
| 297 | Unincorporated El Dorado County | 2,973 | 16.3 | 70 | 182 |
| 298 | Unincorporated El Dorado County | 3,590 | 17.5 | 79 | 206 |
| 299 | Unincorporated El Dorado County | 5,738 | 21.4 | 106 | 268 |
| 300 | Unincorporated El Dorado County | 1,313 | 18.5 | 28 | 71 |

# Appendix B - Generations at Green Valley (Project) Vehicle Miles Traveled (VMT) Details

| TAZ | Community Region | | | Population Details | |
|---|---|---|---|---|---|
| | | Home-based PA VMT | Home-based VMT per Capita | Total Households | Total Population |
| 301 | Unincorporated El Dorado County | 0 | 0.0 | 1 | 2 |
| 302 | Unincorporated El Dorado County | 2,303 | 17.7 | 57 | 130 |
| 303 | El Dorado Diamond Springs | 3,445 | 14.9 | 106 | 231 |
| 304 | El Dorado Diamond Springs | 346 | 12.7 | 12 | 27 |
| 305 | El Dorado Diamond Springs | 0 | 0.0 | 1 | 2 |
| 306 | El Dorado Diamond Springs | 343 | 15.7 | 10 | 22 |
| 307 | El Dorado Diamond Springs | 458 | 12.7 | 16 | 36 |
| 308 | El Dorado Diamond Springs | 254 | 10.2 | 11 | 25 |
| 309 | El Dorado Diamond Springs | 397 | 12.4 | 14 | 32 |
| 310 | El Dorado Diamond Springs | 728 | 12.4 | 26 | 59 |
| 311 | El Dorado Diamond Springs | 1,107 | 12.8 | 38 | 87 |
| 312 | El Dorado Diamond Springs | 847 | 12.1 | 31 | 70 |
| 313 | El Dorado Diamond Springs | 4,138 | 41.9 | 38 | 99 |
| 314 | El Dorado Diamond Springs | 2,968 | 14.4 | 81 | 206 |
| 316 | El Dorado Diamond Springs | 319 | 10.8 | 13 | 30 |
| 317 | El Dorado Diamond Springs | 192 | 10.5 | 8 | 18 |
| 318 | Unincorporated El Dorado County | 4,603 | 14.1 | 128 | 326 |
| 319 | El Dorado Diamond Springs | 1,165 | 11.8 | 38 | 99 |
| 320 | Unincorporated El Dorado County | 2,110 | 47.5 | 18 | 44 |
| 321 | Unincorporated El Dorado County | 6,351 | 24.8 | 104 | 256 |
| 322 | Unincorporated El Dorado County | 7,614 | 19.7 | 153 | 387 |
| 323 | Unincorporated El Dorado County | 3,329 | 25.8 | 51 | 129 |
| 324 | Unincorporated El Dorado County | 4,559 | 27.7 | 64 | 165 |
| 325 | Unincorporated El Dorado County | 849 | 21.5 | 16 | 39 |
| 326 | Unincorporated El Dorado County | 2,681 | 22.2 | 49 | 121 |
| 327 | Placerville | 1,901 | 18.9 | 40 | 101 |
| 328 | Unincorporated El Dorado County | 942 | 19.7 | 19 | 48 |
| 329 | Placerville | 5,151 | 16.2 | 139 | 317 |
| 330 | Unincorporated El Dorado County | 2,956 | 16.1 | 73 | 184 |
| 331 | Unincorporated El Dorado County | 6,760 | 24.7 | 110 | 274 |
| 332 | Unincorporated El Dorado County | 1,704 | 16.3 | 47 | 104 |
| 333 | Unincorporated El Dorado County | 5,359 | 23.8 | 91 | 226 |
| 334 | Unincorporated El Dorado County | 1,097 | 19.0 | 26 | 58 |
| 335 | Unincorporated El Dorado County | 3,152 | 19.1 | 77 | 165 |
| 336 | Unincorporated El Dorado County | 1,385 | 19.7 | 30 | 70 |
| 337 | Unincorporated El Dorado County | 7,196 | 23.9 | 121 | 302 |
| 338 | Unincorporated El Dorado County | 17,446 | 21.0 | 322 | 831 |
| 339 | Unincorporated El Dorado County | 11,786 | 28.7 | 188 | 410 |
| 340 | Unincorporated El Dorado County | 8,071 | 39.4 | 93 | 205 |
| 341 | Unincorporated El Dorado County | 1,825 | 25.8 | 31 | 71 |
| 342 | Unincorporated El Dorado County | 3,099 | 25.0 | 48 | 124 |
| 343 | Unincorporated El Dorado County | 3,837 | 33.2 | 53 | 116 |
| 344 | Unincorporated El Dorado County | 4,221 | 35.2 | 55 | 120 |
| 345 | Unincorporated El Dorado County | 1,820 | 28.7 | 29 | 63 |
| 346 | Unincorporated El Dorado County | 1,321 | 26.7 | 22 | 49 |
| 347 | Unincorporated El Dorado County | 3,496 | 32.3 | 42 | 108 |
| 348 | Unincorporated El Dorado County | 2,770 | 25.1 | 49 | 110 |
| 349 | Unincorporated El Dorado County | 7,538 | 39.4 | 83 | 191 |
| 350 | Unincorporated El Dorado County | 1,577 | 32.8 | 22 | 48 |
| 351 | Unincorporated El Dorado County | 1,780 | 35.5 | 23 | 50 |
| 352 | Unincorporated El Dorado County | 2,482 | 39.2 | 29 | 63 |
| 353 | Unincorporated El Dorado County | 13,121 | 36.0 | 167 | 365 |
| 354 | Unincorporated El Dorado County | 3,351 | 29.0 | 53 | 116 |
| 355 | Placerville | 5,938 | 10.8 | 241 | 550 |
| 356 | Placerville | 2,475 | 12.7 | 91 | 195 |
| 357 | Unincorporated El Dorado County | 3,585 | 17.2 | 89 | 209 |
| 358 | Placerville | 2,713 | 14.3 | 81 | 190 |
| 359 | Unincorporated El Dorado County | 4,805 | 18.9 | 105 | 254 |
| 360 | Unincorporated El Dorado County | 5,515 | 23.3 | 98 | 237 |
| 361 | Placerville | 9,090 | 9.7 | 458 | 938 |
| 362 | Placerville | 5,282 | 8.9 | 252 | 591 |
| 363 | Unincorporated El Dorado County | 326 | 10.5 | 13 | 31 |
| 364 | Placerville | 3,317 | 10.1 | 138 | 328 |
| 365 | El Dorado Diamond Springs | 7,944 | 11.0 | 322 | 722 |
| 366 | El Dorado Diamond Springs | 243 | 7.8 | 15 | 31 |
| 367 | El Dorado Diamond Springs | 0 | 0.0 | 0 | 0 |
| 368 | El Dorado Diamond Springs | 1,628 | 10.9 | 68 | 149 |
| 369 | El Dorado Diamond Springs | 5,530 | 10.9 | 228 | 507 |
| 370 | El Dorado Diamond Springs | 0 | 0.0 | 0 | 0 |
| 371 | El Dorado Diamond Springs | 747 | 16.0 | 21 | 47 |
| 372 | El Dorado Diamond Springs | 7,260 | 16.8 | 195 | 433 |
| 373 | El Dorado Diamond Springs | 598 | 10.2 | 26 | 59 |
| 374 | El Dorado Diamond Springs | 302 | 10.6 | 13 | 28 |
| 375 | El Dorado Diamond Springs | 343 | 10.8 | 14 | 32 |
| 376 | El Dorado Diamond Springs | 889 | 11.6 | 34 | 77 |

# Appendix B - Generations at Green Valley (Project) Vehicle Miles Traveled (VMT) Details

| TAZ | Community Region | | | Population Details | |
|---|---|---|---|---|---|
| | | Home-based PA VMT | Home-based VMT per Capita | Total Households | Total Population |
| 377 | El Dorado Diamond Springs | 301 | 10.2 | 13 | 29 |
| 378 | El Dorado Diamond Springs | 608 | 10.3 | 27 | 59 |
| 379 | El Dorado Diamond Springs | 1,045 | 9.9 | 48 | 105 |
| 380 | El Dorado Diamond Springs | 223 | 8.5 | 12 | 26 |
| 381 | El Dorado Diamond Springs | 127 | 8.3 | 7 | 15 |
| 382 | El Dorado Diamond Springs | 216 | 9.0 | 11 | 24 |
| 383 | Unincorporated El Dorado County | 1,629 | 15.9 | 46 | 102 |
| 384 | El Dorado Diamond Springs | 3,747 | 14.1 | 120 | 267 |
| 385 | El Dorado Diamond Springs | 12,939 | 12.9 | 451 | 1,002 |
| 386 | El Dorado Diamond Springs | 2,761 | 13.8 | 90 | 200 |
| 387 | El Dorado Diamond Springs | 888 | 11.1 | 36 | 80 |
| 388 | El Dorado Diamond Springs | 0 | 0.0 | 0 | 0 |
| 389 | El Dorado Diamond Springs | 6 | 1.3 | 2 | 4 |
| 390 | El Dorado Diamond Springs | 3,601 | 9.5 | 182 | 379 |
| 391 | El Dorado Diamond Springs | 165 | 7.2 | 11 | 23 |
| 392 | El Dorado Diamond Springs | 553 | 9.5 | 28 | 58 |
| 393 | El Dorado Diamond Springs | 5,765 | 9.5 | 268 | 605 |
| 394 | El Dorado Diamond Springs | 186 | 8.5 | 8 | 22 |
| 395 | Placerville | 1,450 | 8.8 | 74 | 166 |
| 396 | El Dorado Diamond Springs | 0 | 0.0 | 0 | 0 |
| 397 | El Dorado Diamond Springs | 1,198 | 10.5 | 50 | 114 |
| 398 | El Dorado Diamond Springs | 296 | 9.4 | 14 | 32 |
| 399 | El Dorado Diamond Springs | 1,061 | 10.9 | 43 | 97 |
| 400 | El Dorado Diamond Springs | 235 | 7.0 | 16 | 33 |
| 401 | Placerville | 599 | 9.6 | 28 | 63 |
| 402 | El Dorado Diamond Springs | 1,347 | 10.2 | 51 | 133 |
| 403 | El Dorado Diamond Springs | 3,372 | 13.0 | 124 | 258 |
| 404 | El Dorado Diamond Springs | 365 | 8.8 | 19 | 42 |
| 405 | El Dorado Diamond Springs | 132 | 6.7 | 9 | 20 |
| 406 | El Dorado Diamond Springs | 488 | 9.3 | 24 | 53 |
| 407 | El Dorado Diamond Springs | 17 | 8.3 | 1 | 2 |
| 408 | El Dorado Diamond Springs | 16 | 7.6 | 1 | 2 |
| 409 | Placerville | 2,775 | 11.2 | 104 | 248 |
| 410 | El Dorado Diamond Springs | 13,367 | 13.0 | 426 | 1,031 |
| 411 | Placerville | 5,415 | 7.6 | 298 | 712 |
| 412 | Unincorporated El Dorado County | 3,024 | 14.7 | 86 | 206 |
| 413 | Placerville | 3,593 | 11.9 | 126 | 301 |
| 414 | El Dorado Diamond Springs | 111 | 7.6 | 7 | 15 |
| 415 | Unincorporated El Dorado County | 413 | 10.2 | 18 | 40 |
| 416 | El Dorado Diamond Springs | 136 | 7.2 | 9 | 19 |
| 417 | Placerville | 1,008 | 8.9 | 45 | 114 |
| 418 | Placerville | 0 | 0.0 | 0 | 0 |
| 419 | Placerville | 0 | 0.0 | 0 | 0 |
| 420 | Placerville | 874 | 8.7 | 42 | 100 |
| 421 | Placerville | 1,495 | 9.2 | 68 | 163 |
| 422 | Placerville | 5,723 | 8.8 | 278 | 652 |
| 423 | Unincorporated El Dorado County | 450 | 9.4 | 20 | 48 |
| 424 | Placerville | 4,393 | 11.2 | 171 | 391 |
| 425 | Placerville | 29,000 | 11.1 | 1,167 | 2,617 |
| 426 | Placerville | 953 | 11.6 | 33 | 82 |
| 427 | Unincorporated El Dorado County | 4,324 | 18.7 | 93 | 232 |
| 428 | Unincorporated El Dorado County | 712 | 13.0 | 22 | 55 |
| 429 | Unincorporated El Dorado County | 1,567 | 19.0 | 35 | 83 |
| 430 | Unincorporated El Dorado County | 2,336 | 17.1 | 58 | 137 |
| 431 | Placerville | 427 | 9.5 | 22 | 45 |
| 432 | Unincorporated El Dorado County | 9,600 | 13.2 | 309 | 729 |
| 433 | Placerville | 9,046 | 8.7 | 481 | 1,041 |
| 434 | Placerville | 543 | 7.7 | 33 | 71 |
| 435 | Placerville | 576 | 7.5 | 36 | 77 |
| 436 | Unincorporated El Dorado County | 1,084 | 17.4 | 25 | 62 |
| 437 | Unincorporated El Dorado County | 5,414 | 18.9 | 117 | 287 |
| 438 | Unincorporated El Dorado County | 5,029 | 18.1 | 124 | 278 |
| 439 | Unincorporated El Dorado County | 6,117 | 17.5 | 156 | 350 |
| 440 | Unincorporated El Dorado County | 1,005 | 16.0 | 28 | 63 |
| 441 | Placerville | 351 | 12.2 | 12 | 29 |
| 442 | Placerville | 10,026 | 13.1 | 313 | 768 |
| 443 | Unincorporated El Dorado County | 1,466 | 17.2 | 38 | 85 |
| 444 | Unincorporated El Dorado County | 201 | 10.5 | 8 | 19 |
| 445 | Placerville | 835 | 14.8 | 23 | 56 |
| 446 | Placerville | 778 | 13.3 | 25 | 59 |
| 447 | Unincorporated El Dorado County | 3,784 | 20.0 | 76 | 189 |
| 448 | Placerville | 2,018 | 15.5 | 53 | 130 |
| 449 | Unincorporated El Dorado County | 521 | 17.4 | 14 | 30 |
| 450 | Unincorporated El Dorado County | 2,479 | 13.8 | 84 | 180 |
| 451 | Unincorporated El Dorado County | 967 | 16.7 | 27 | 58 |

# Appendix B - Generations at Green Valley (Project) Vehicle Miles Traveled (VMT) Details

| TAZ | Community Region | | | Population Details | |
|---|---|---|---|---|---|
| | | Home-based PA VMT | Home-based VMT per Capita | Total Households | Total Population |
| 452 | Placerville | 3,820 | 14.7 | 121 | 259 |
| 453 | Placerville | 3,032 | 9.8 | 145 | 310 |
| 454 | Unincorporated El Dorado County | 503 | 9.4 | 25 | 54 |
| 455 | Unincorporated El Dorado County | 2,910 | 16.9 | 73 | 172 |
| 456 | Unincorporated El Dorado County | 1,983 | 18.2 | 51 | 109 |
| 457 | Unincorporated El Dorado County | 2,895 | 21.1 | 62 | 137 |
| 458 | Placerville | 2,498 | 15.9 | 67 | 157 |
| 459 | Placerville | 330 | 12.8 | 11 | 26 |
| 460 | Unincorporated El Dorado County | 886 | 18.8 | 22 | 47 |
| 461 | Unincorporated El Dorado County | 197 | 14.0 | 6 | 14 |
| 462 | Unincorporated El Dorado County | 1,177 | 17.7 | 31 | 66 |
| 463 | Unincorporated El Dorado County | 6,973 | 35.9 | 85 | 194 |
| 464 | Unincorporated El Dorado County | 3,154 | 30.4 | 47 | 104 |
| 465 | Unincorporated El Dorado County | 5,464 | 40.9 | 58 | 134 |
| 466 | Unincorporated El Dorado County | 4,136 | 29.7 | 61 | 139 |
| 467 | Unincorporated El Dorado County | 3,690 | 41.4 | 39 | 89 |
| 468 | Unincorporated El Dorado County | 9,458 | 34.2 | 120 | 277 |
| 469 | Unincorporated El Dorado County | 5,442 | 41.6 | 59 | 131 |
| 470 | Unincorporated El Dorado County | 3,012 | 41.2 | 32 | 73 |
| 471 | Unincorporated El Dorado County | 1,949 | 37.1 | 23 | 53 |
| 472 | Unincorporated El Dorado County | 2,179 | 36.7 | 26 | 59 |
| 473 | Unincorporated El Dorado County | 530 | 23.0 | 10 | 23 |
| 474 | Unincorporated El Dorado County | 2,066 | 25.6 | 37 | 81 |
| 475 | Unincorporated El Dorado County | 2,266 | 27.3 | 38 | 83 |
| 476 | Unincorporated El Dorado County | 1,074 | 26.0 | 16 | 41 |
| 477 | Unincorporated El Dorado County | 2,427 | 35.1 | 30 | 69 |
| 478 | Unincorporated El Dorado County | 1,796 | 27.2 | 30 | 66 |
| 479 | Unincorporated El Dorado County | 2,946 | 25.1 | 51 | 118 |
| 480 | Unincorporated El Dorado County | 1,908 | 41.8 | 20 | 46 |
| 481 | Unincorporated El Dorado County | 1,930 | 43.9 | 20 | 44 |
| 482 | Unincorporated El Dorado County | 7,734 | 47.5 | 74 | 163 |
| 483 | Unincorporated El Dorado County | 4,999 | 20.1 | 115 | 249 |
| 484 | Unincorporated El Dorado County | 5,317 | 23.4 | 91 | 227 |
| 485 | Unincorporated El Dorado County | 1,448 | 38.7 | 15 | 37 |
| 486 | Unincorporated El Dorado County | 5,621 | 36.1 | 69 | 156 |
| 487 | Unincorporated El Dorado County | 10,694 | 20.6 | 221 | 519 |
| 488 | Unincorporated El Dorado County | 7,097 | 29.4 | 107 | 242 |
| 489 | Unincorporated El Dorado County | 6,612 | 22.0 | 133 | 300 |
| 490 | Unincorporated El Dorado County | 1,454 | 24.3 | 24 | 60 |
| 491 | Unincorporated El Dorado County | 8,913 | 22.3 | 160 | 399 |
| 492 | Unincorporated El Dorado County | 4,175 | 23.7 | 71 | 176 |
| 493 | Unincorporated El Dorado County | 4,344 | 24.3 | 72 | 178 |
| 494 | Unincorporated El Dorado County | 3,803 | 22.4 | 68 | 170 |
| 495 | Unincorporated El Dorado County | 808 | 20.2 | 16 | 40 |
| 496 | Unincorporated El Dorado County | 4,293 | 21.4 | 81 | 201 |
| 497 | Unincorporated El Dorado County | 5,602 | 25.0 | 88 | 224 |
| 498 | Unincorporated El Dorado County | 4,324 | 27.4 | 70 | 158 |
| 499 | Unincorporated El Dorado County | 1,697 | 22.7 | 30 | 75 |
| 500 | Unincorporated El Dorado County | 1,302 | 50.4 | 11 | 26 |
| 501 | Unincorporated El Dorado County | 946 | 19.4 | 22 | 49 |
| 502 | Unincorporated El Dorado County | 7,270 | 26.7 | 117 | 272 |
| 503 | Unincorporated El Dorado County | 0 | 0.0 | 1 | 2 |
| 504 | Unincorporated El Dorado County | 6,172 | 19.7 | 141 | 313 |
| 505 | Unincorporated El Dorado County | 75 | 11.3 | 3 | 7 |
| 506 | Unincorporated El Dorado County | 1,174 | 18.9 | 28 | 62 |
| 507 | Unincorporated El Dorado County | 2,221 | 19.1 | 50 | 116 |
| 508 | Unincorporated El Dorado County | 3,265 | 17.8 | 85 | 184 |
| 509 | Unincorporated El Dorado County | 395 | 14.8 | 12 | 27 |
| 510 | Unincorporated El Dorado County | 3,285 | 16.5 | 92 | 199 |
| 511 | Unincorporated El Dorado County | 1,735 | 16.6 | 45 | 105 |
| 512 | Unincorporated El Dorado County | 1,832 | 21.3 | 37 | 86 |
| 513 | Unincorporated El Dorado County | 10,304 | 29.1 | 142 | 354 |
| 514 | Unincorporated El Dorado County | 44,977 | 29.0 | 622 | 1,551 |
| 515 | Unincorporated El Dorado County | 4,634 | 26.3 | 69 | 176 |
| 516 | Unincorporated El Dorado County | 11,302 | 31.2 | 142 | 362 |
| 517 | Unincorporated El Dorado County | 19,761 | 23.0 | 388 | 857 |
| 518 | Unincorporated El Dorado County | 15,226 | 22.7 | 289 | 671 |
| 519 | Unincorporated El Dorado County | 7,500 | 22.8 | 142 | 330 |
| 520 | Unincorporated El Dorado County | 15,625 | 25.3 | 266 | 617 |
| 521 | Unincorporated El Dorado County | 12,390 | 19.3 | 290 | 641 |
| 522 | Unincorporated El Dorado County | 6,857 | 31.0 | 85 | 221 |
| 523 | Unincorporated El Dorado County | 9,562 | 16.2 | 240 | 588 |
| 524 | Unincorporated El Dorado County | 11,787 | 24.0 | 205 | 490 |
| 525 | Unincorporated El Dorado County | 6,832 | 34.3 | 85 | 199 |
| 526 | Unincorporated El Dorado County | 306 | 25.1 | 5 | 12 |

# Appendix B - Generations at Green Valley (Project) Vehicle Miles Traveled (VMT) Details

| TAZ | Community Region | | | Population Details | |
|---|---|---|---|---|---|
| | | Home-based PA VMT | Home-based VMT per Capita | Total Households | Total Population |
| 527 | Unincorporated El Dorado County | 9,055 | 23.8 | 162 | 380 |
| 528 | Unincorporated El Dorado County | 81,524 | 33.6 | 1,001 | 2,429 |
| 529 | Unincorporated El Dorado County | 1,072 | 29.6 | 15 | 36 |
| 530 | Unincorporated El Dorado County | 16,370 | 35.5 | 191 | 462 |
| 531 | Unincorporated El Dorado County | 3,220 | 39.2 | 34 | 82 |
| 532 | Unincorporated El Dorado County | 4,906 | 33.3 | 61 | 147 |
| 533 | Unincorporated El Dorado County | 8,053 | 29.7 | 105 | 271 |
| 534 | Unincorporated El Dorado County | 4,689 | 36.6 | 53 | 128 |
| 535 | Unincorporated El Dorado County | 7,373 | 33.3 | 91 | 221 |
| 536 | Unincorporated El Dorado County | 6,163 | 30.9 | 82 | 200 |
| 537 | Unincorporated El Dorado County | 13,382 | 33.3 | 165 | 402 |
| 538 | Unincorporated El Dorado County | 2,809 | 26.3 | 44 | 107 |
| 539 | Unincorporated El Dorado County | 1,269 | 87.5 | 6 | 15 |
| 540 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 541 | Unincorporated El Dorado County | 1,067 | 25.3 | 18 | 42 |
| 542 | Unincorporated El Dorado County | 2,873 | 23.3 | 52 | 123 |
| 543 | Unincorporated El Dorado County | 2,251 | 19.7 | 49 | 114 |
| 544 | Unincorporated El Dorado County | 440 | 20.9 | 9 | 21 |
| 545 | Unincorporated El Dorado County | 1,920 | 35.7 | 23 | 54 |
| 546 | Unincorporated El Dorado County | 6,050 | 42.4 | 61 | 143 |
| 547 | Unincorporated El Dorado County | 482 | 20.6 | 10 | 23 |
| 548 | Unincorporated El Dorado County | 22,485 | 24.7 | 386 | 910 |
| 549 | Unincorporated El Dorado County | 2,547 | 25.7 | 42 | 99 |
| 550 | Unincorporated El Dorado County | 325 | 18.1 | 7 | 18 |
| 551 | Unincorporated El Dorado County | 2,355 | 22.3 | 41 | 105 |
| 552 | Unincorporated El Dorado County | 385 | 20.6 | 8 | 19 |
| 553 | Unincorporated El Dorado County | 1,954 | 26.1 | 32 | 75 |
| 554 | Unincorporated El Dorado County | 5,048 | 26.0 | 83 | 194 |
| 555 | Unincorporated El Dorado County | 2,115 | 26.3 | 34 | 80 |
| 556 | Unincorporated El Dorado County | 6,584 | 34.4 | 82 | 192 |
| 557 | Unincorporated El Dorado County | 2,033 | 24.9 | 35 | 82 |
| 558 | Unincorporated El Dorado County | 2,804 | 33.2 | 36 | 84 |
| 559 | Unincorporated El Dorado County | 1,736 | 29.6 | 25 | 59 |
| 560 | Unincorporated El Dorado County | 1,552 | 24.6 | 27 | 63 |
| 561 | Unincorporated El Dorado County | 1,494 | 28.7 | 22 | 52 |
| 562 | Unincorporated El Dorado County | 5,634 | 38.7 | 62 | 145 |
| 563 | Unincorporated El Dorado County | 3,171 | 44.8 | 32 | 71 |
| 564 | Unincorporated El Dorado County | 782 | 23.4 | 14 | 33 |
| 565 | Unincorporated El Dorado County | 3,478 | 26.9 | 56 | 129 |
| 566 | Unincorporated El Dorado County | 5,287 | 24.0 | 93 | 220 |
| 567 | Unincorporated El Dorado County | 774 | 18.6 | 18 | 42 |
| 568 | Unincorporated El Dorado County | 1,183 | 19.2 | 26 | 62 |
| 569 | Unincorporated El Dorado County | 2,642 | 18.3 | 61 | 144 |
| 570 | Unincorporated El Dorado County | 1,985 | 21.5 | 40 | 92 |
| 571 | Unincorporated El Dorado County | 1,749 | 23.0 | 33 | 76 |
| 572 | Unincorporated El Dorado County | 1,274 | 20.8 | 25 | 61 |
| 573 | Unincorporated El Dorado County | 7,621 | 38.8 | 89 | 197 |
| 574 | Unincorporated El Dorado County | 7,600 | 43.7 | 71 | 174 |
| 575 | Unincorporated El Dorado County | 3,897 | 54.8 | 29 | 71 |
| 576 | Unincorporated El Dorado County | 1,475 | 35.1 | 19 | 42 |
| 577 | Unincorporated El Dorado County | 1,050 | 36.6 | 13 | 29 |
| 578 | Unincorporated El Dorado County | 35,121 | 43.0 | 370 | 817 |
| 579 | Unincorporated El Dorado County | 4,997 | 51.8 | 38 | 96 |
| 580 | Unincorporated El Dorado County | 3,957 | 44.6 | 35 | 89 |
| 581 | Unincorporated El Dorado County | 4,796 | 50.7 | 43 | 95 |
| 582 | Unincorporated El Dorado County | 1,592 | 47.1 | 13 | 34 |
| 583 | Unincorporated El Dorado County | 41,741 | 53.9 | 352 | 774 |
| 584 | Unincorporated El Dorado County | 1,955 | 49.3 | 18 | 40 |
| 585 | Unincorporated El Dorado County | 13,754 | 50.4 | 124 | 273 |
| 586 | Unincorporated El Dorado County | 2,273 | 25.1 | 51 | 91 |
| 587 | Unincorporated El Dorado County | 3,275 | 32.9 | 39 | 99 |
| 588 | Unincorporated El Dorado County | 28,905 | 35.9 | 323 | 805 |
| 589 | Unincorporated El Dorado County | 601 | 50.1 | 3 | 12 |
| 590 | Unincorporated El Dorado County | 1,084 | 23.8 | 18 | 46 |
| 591 | Unincorporated El Dorado County | 110 | 14.5 | 3 | 8 |
| 592 | Unincorporated El Dorado County | 12,352 | 16.5 | 339 | 749 |
| 593 | Unincorporated El Dorado County | 8,708 | 22.8 | 151 | 382 |
| 594 | Unincorporated El Dorado County | 24,345 | 30.8 | 312 | 790 |
| 595 | Unincorporated El Dorado County | 1,712 | 30.3 | 25 | 56 |
| 596 | Unincorporated El Dorado County | 2,614 | 30.8 | 34 | 85 |
| 597 | Unincorporated El Dorado County | 3,699 | 15.8 | 106 | 234 |
| 598 | Unincorporated El Dorado County | 492 | 15.9 | 14 | 31 |
| 599 | Unincorporated El Dorado County | 918 | 24.4 | 17 | 38 |
| 600 | Unincorporated El Dorado County | 10,296 | 22.7 | 205 | 453 |
| 601 | Unincorporated El Dorado County | 1,712 | 77.9 | 10 | 22 |

# Appendix B - Generations at Green Valley (Project) Vehicle Miles Traveled (VMT) Details

| TAZ | Community Region | | | Population Details | |
|---|---|---|---|---|---|
| | | Home-based PA VMT | Home-based VMT per Capita | Total Households | Total Population |
| 602 | Unincorporated El Dorado County | 107 | 20.1 | 3 | 5 |
| 603 | Unincorporated El Dorado County | 641 | 32.8 | 11 | 20 |
| 604 | Unincorporated El Dorado County | 1,644 | 49.6 | 17 | 33 |
| 605 | Unincorporated El Dorado County | 1,666 | 43.9 | 18 | 38 |
| 606 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 607 | Unincorporated El Dorado County | 4,570 | 92.5 | 19 | 49 |
| 608 | Unincorporated El Dorado County | 0 | 0.0 | 1 | 2 |
| 609 | Unincorporated El Dorado County | 3,007 | 41.9 | 34 | 72 |
| 610 | El Dorado Hills | 181 | 0.0 | 0 | 0 |
| 611 | El Dorado Hills | 0 | 0.0 | 0 | 0 |
| 612 | El Dorado Hills | 0 | 0.0 | 0 | 0 |
| 613 | Unincorporated El Dorado County | 59 | 11.5 | 2 | 5 |
| 614 | El Dorado Hills | 41,978 | 20.6 | 797 | 2,033 |
| 615 | El Dorado Hills | 32,915 | 18.0 | 683 | 1,831 |
| 616 | El Dorado Hills | 31,287 | 15.7 | 787 | 1,991 |
| 617 | El Dorado Hills | 11,647 | 21.3 | 187 | 547 |
| 618 | El Dorado Hills | 0 | 0.0 | 0 | 0 |
| 619 | El Dorado Hills | 0 | 0.0 | 0 | 0 |
| 620 | El Dorado Hills | 3,550 | 0.0 | 0 | 0 |
| 621 | El Dorado Hills | 17,807 | 18.6 | 327 | 957 |
| 622 | El Dorado Hills | 19,594 | 18.1 | 370 | 1,083 |
| 623 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 624 | El Dorado Hills | 16,249 | 18.0 | 308 | 905 |
| 625 | El Dorado Hills | 0 | 0.0 | 0 | 0 |
| 626 | Unincorporated El Dorado County | 7,475 | 19.5 | 164 | 383 |
| 627 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 628 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 629 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 630 | El Dorado Hills | 17,810 | 19.6 | 380 | 908 |
| 631 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 632 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 633 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 634 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 635 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 636 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 637 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 638 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 639 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 640 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 641 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 642 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 643 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 644 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 645 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 646 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 647 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 648 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 649 | Unincorporated El Dorado County | 0 | 0.0 | 0 | 0 |
| 650 | Outside of County | 1,501,705 | 0.0 | 0 | 0 |
| 651 | Outside of County | 14,383 | 0.0 | 0 | 0 |
| 652 | Outside of County | 0 | 0.0 | 0 | 0 |
| 653 | Outside of County | 161,071 | 0.0 | 0 | 0 |
| 654 | Outside of County | 9,201 | 0.0 | 0 | 0 |
| 655 | Outside of County | 109,023 | 0.0 | 0 | 0 |
| 656 | Outside of County | 18,449 | 0.0 | 0 | 0 |
| 657 | Outside of County | 8,295 | 0.0 | 0 | 0 |
| 658 | Outside of County | 0 | 0.0 | 0 | 0 |
| 659 | Outside of County | 3,161 | 0.0 | 0 | 0 |
| 660 | Outside of County | 82,999 | 0.0 | 0 | 0 |
| 661 | Outside of County | 72,288 | 0.0 | 0 | 0 |
| 662 | Outside of County | 342,488 | 0.0 | 0 | 0 |
| 663 | Outside of County | 229,625 | 0.0 | 0 | 0 |
| 664 | Outside of County | 192,111 | 0.0 | 0 | 0 |
| 665 | Outside of County | 80,777 | 0.0 | 0 | 0 |
| 666 | Outside of County | 45,726 | 0.0 | 0 | 0 |
| 667 | Outside of County | 0 | 0.0 | 0 | 0 |
| 668 | Outside of County | 310,849 | 0.0 | 0 | 0 |
| 669 | Outside of County | 0 | 0.0 | 0 | 0 |
| 670 | Outside of County | 0 | 0.0 | 0 | 0 |
| 671 | Outside of County | 96,229 | 0.0 | 0 | 0 |
| 672 | Outside of County | 34,199 | 0.0 | 0 | 0 |
| 673 | Outside of County | 14,892 | 0.0 | 0 | 0 |
| 674 | Outside of County | 29,916 | 0.0 | 0 | 0 |

# Appendix C

*Generations at Green Valley (Project) Vehicle Miles Traveled (VMT) Details for Cumulative (2040) Conditions*

| Jurisdiction | | | Population Details | |
|---|---|---|---|---|
| | Home-based PA VMT | Home-based VMT per Capita | Total Households | Total Population |
| Generations at Green Valley | 17,873 | 19.7 | 380 | 908 |

# Appendix J

WUI Fire Protection Plan

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# WUI FIRE PROTECTION PLAN



## Generations at Green Valley WUI Fire Protection Plan
## EDC Project # GPA 22-0001, Z22-0001, TM22-0001, DA24-001
## June 6, 2024

**Prepared By:**

**Ron Phillips, Phillips Consulting Services**
**Georgetown, CA 95634**
**530-217-7432**

**PREPARED FOR THE COUNTY OF EL DORADO**

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# PLAN APPROVAL SHEET

The Generations at Green Valley WUI Fire Protection Plan (Fire Safe Plan or FSP) has been designed to evaluate the level of potential fire hazard affecting or resulting from the proposed project, and the methods and measures proposed to minimize that hazard. The approximately 280-acre project is located in the unincorporated portion of El Dorado County in the community of El Dorado Hills. The Project proposes to construct up to 379 residential lots (214 age restricted), an approximately 5-acre clubhouse site, nine open space lots, multiple private roads, and 4-acre park site.

The plan has been developed to conform with California Code of Regulations Title 14 §§ 1270-1276 (Fire Safe Regulations), California Code of Regulations Title 24, Part 9 – § 4903 (Plans) and El Dorado County Fire Protection Standard W-002 (Wildland Urban Interface Fire Protection Plans).

The Generations at Green Valley WUI Fire Safe Plan replaces the following previously prepared fire safe plan for this Project:

- Dixon Ranch WUI Fire Safe Plan, prepared by William F. Draper, RPF, dated July 22, 2013.

The Generations at Green Valley WUI Fire Protection Plan (Fire Safe Plan) has been reviewed and approved by the following fire agencies located in El Dorado County:

DATE PUBLISHED: June 6, 2024

| PREPARED BY: | APPROVED BY: | APPROVED BY: |
|---|---|---|
| DocuSigned by: Ronald Phillips, Jr. DFF4B5E2CDDA4C4... | DocuSigned by: Chrishana Fields 096D536DF6F8429... | DocuSigned by: Jeff Hoag EF9F8B40873747E... |
| Ronald A. Phillips | Chrishana Fields, Fire Marshal | Jeff Hoag, Battalion Chief |
| Phillips Consulting | El Dorado Hills Fire Department | CAL FIRE – AEU |

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# FORWARD

The following **Generations at Green Valley WUI Fire Protection Plan** (FSP) has been prepared for the Generations at Green Valley Project (Project) in El Dorado Hills, California. The FSP for the Project meets the requirements described in Chapter 49 of the California Fire Code and various other State and County statues and regulations. The FSP addresses the following topics:

- Introduction (Chapter 1)
- Existing Conditions (Chapter 2)
- Regulatory Requirements (Chapter 3)
- Fire Protection Planning (Chapter 4)
- Emergency Preparedness and Evacuation Planning (Chapter 5)
- Fuel Reduction Management and Defensible Space Concepts (Chapter 6)
- Emergency Preparedness and Evacuation Plan Mitigation Strategies (Chapter 7)
- Plan Appendixes (Chapter 8)

The goals of this FSP are as follows:

- Reduce the exposure of vulnerable buildings to high intensity flames.
- Reduce the quantity of embers accumulating at a building based on factors related to the building characteristics and adjacent fuel treatments.
- Reduce the likelihood of urban conflagration due to treatment of fuels in proximity to buildings.
- Enhance the level of preparedness by both residents and visitors for a safe evacuation during a wildfire or similar hazardous situation.

The FSP specifically applies to the Generations at Green Valley Project. The FSP provides a framework for protection of residents and visitors from natural hazards, the prevention of fire, and preparation for responding to an emergency evacuation of the Project should the need arise. The FSP is intended to be utilized during the development, construction, and occupancy phases of the Project.

For the purpose of interpreting and applying the provisions found within each chapter the terms shall and should are found throughout. The use of the term “shall” refer to requirements of the Plan as mandated through State statue or regulation. The use of the term “should” refer to recommendations cited in the document by the authors.

END OF FORWARD

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# CHAPTER 1: INTRODUCTION

## 1.1 Chapter Overview

The purpose of this plan is to generate and memorialize the fire safety requirements of the Fire Authority Having Jurisdiction (FAHJ), namely the California Department of Forestry and Fire Protection (CAL FIRE) and the El Dorado Hills Fire Department (EDHFD), during all phases of the development process. Recommendations for effectively mitigating identified impacts are based on site-specific characteristics and incorporate input from the project applicant and CAL FIRE / EDHFD. This FSP incorporates applicable fire safety regulations and requirements and documents a selection of these regulations that are most pertinent to the Project's unique residential development and location.

This FSP has been prepared for the proposed Project in unincorporated El Dorado County, California. The purpose of the FSP is to assess the potential impacts resulting from wildland fire hazards and identify the measures necessary to adequately mitigate those impacts. As part of the assessment, this plan has considered the fire risk presented by the site including: property location and topography, geology (soils and slopes), combustible vegetation (fuel types), climatic conditions, fire history and the proposed land use and configuration.

This FSP addresses water supply, access, structural ignitability and ignition resistive building features, fire protection systems and equipment, impacts to existing emergency services, defensible space, and vegetation management. This plan identifies fuel modification/management zones and recommends the types and methods of treatment that will protect this project and its essential infrastructure. In addition, this FSP recommends enhanced fire protection measures that the Generations at Green Valley Homeowner's Association (HOA), and individual property owners will take to reduce the probability of structural ignition during the occupancy phase of the Project.

The FSP should be updated no less than once every 5 years or as changes to state and local regulations occur to ensure that the plan can be effectively utilized by all stakeholders.

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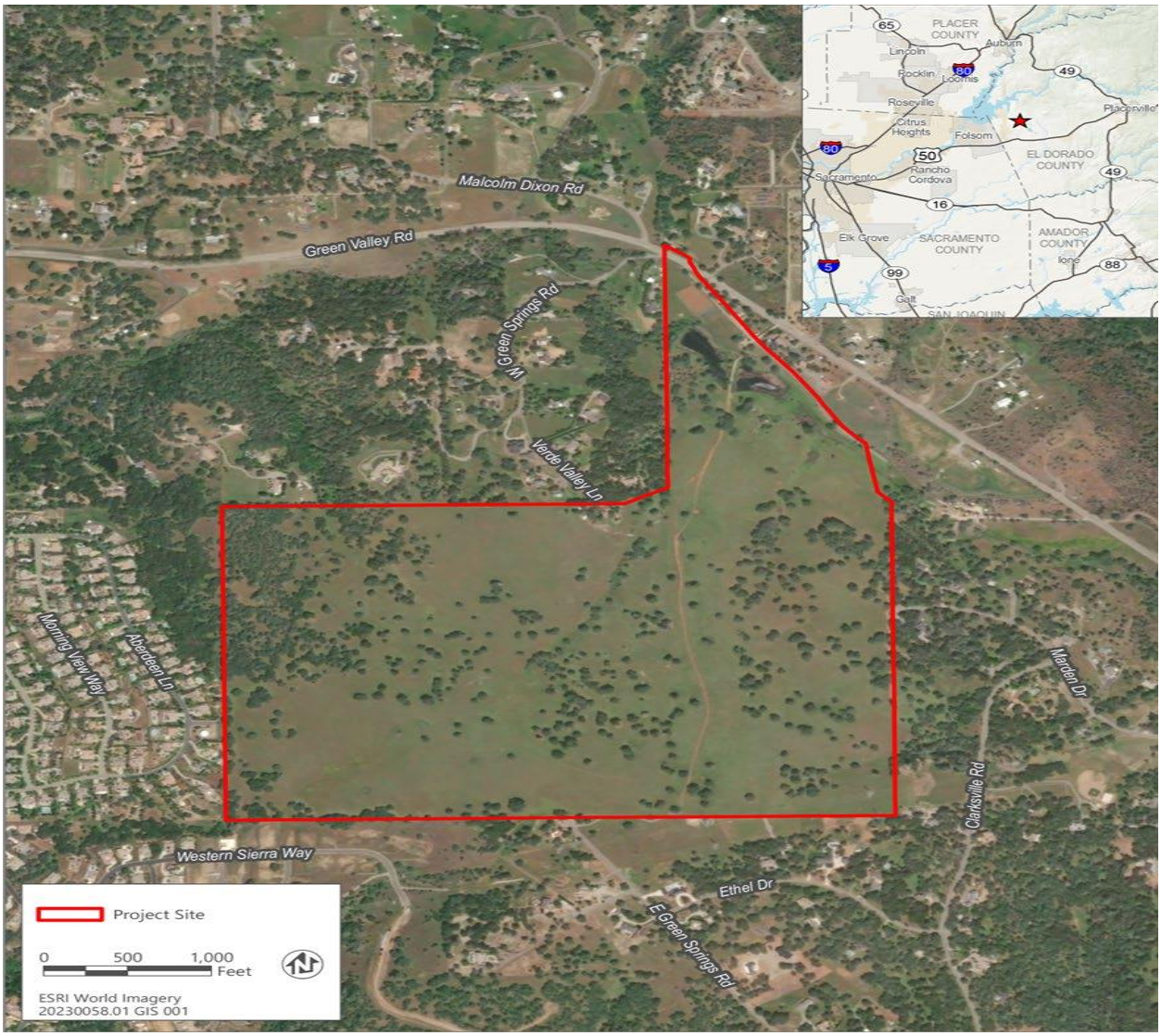
## 1.2 Terms and Definitions Related to this Plan

| Term | Definition |
|---|---|
| Defensible Space | Is the design and maintenance of natural and/or landscaped areas in an area where mitigation actions are undertaken to reduce building loss from a wildfire. It is also intended to provide access to firefighters for fire suppression actions and to provide a safe zone for them to work. Defensible space is based on four general concepts:<br>1. Elimination of combustible vegetation and other materials within 5' of the building.<br>2. Fuel removal or reduction within 100' of buildings in all directions<br>3. Thinning, pruning and removal of continuous and dense uninterrupted layers of vegetation<br>4. Removal of ladder fuels within 6' from the ground to prevent fire spread through tree canopies. |
| Emergency Access / Egress (EAE) | Refers to a road or other connection designed to connect directly to a through road and used to comply with 14CCR §1273.08 (Maximum Length of New Dead-End Roads) and EDHCWD Fire Code Section D107.2. The road shall serve as a secondary means of emergency access and civilian evacuation for the Project. |
| Emergency Vehicle Access (EVA) | Refers to a road or other connection designed to connect directly to a through road to provide additional access points to the Project for emergency vehicles. |

| Term | Definition |
|---|---|
| Evacuation Order | Refers to a situation involving an Immediate threat to life. This is a lawful order to leave now. The area is lawfully closed to public access. |
| Evacuation Warning | Refers to a potential threat to life and/or property. Those who require additional time to evacuate, and those with pets and livestock should leave immediately. |
| Fuel Reduction | Refers to the decrease of wildfire fuels such as trees, shrubbery, grasses, and other natural materials to reduce risks to human life and damage to personal property. Fuel reduction can result in less extreme fire behavior and intensity through decreased fire spread rates and reduced flame lengths. |
| Wildfire | Any uncontrolled fire spreading through vegetative fuels that threatens to destroy life, property or resources as defined in Public Resources Code Sections 4103 and 4104. |
| Wildland Urban Interface (WUI) | A geographical area identified by the state as a “Fire Hazard Severity Zone” in accordance with Public Resources Code Sections 4201through 4204 and Government Code Sections 51175 through 51189, or other areas designated by the enforcing agency to be at a significant risk from wildfires. |

## 1.3 Project Summary

**Location:** Unincorporated area of El Dorado County in the El Dorado Hills Community Region. The Project is located south of Green Valley Road, northeast of the West Green Springs Road neighborhood, west of the Green Springs Ranch, and north of Highland View. The Project site is located on five current parcels, El Dorado County Assessor Parcel Numbers (APN) 126-020-001, 126-020-002, 126-020-003, 126-020-004 and 126-150-023. The Map Coordinate for the Project is 38.704040N, 121.045090W. The Project applicant is Green Valley Road Benefits, LLC. See Figure 1 for the proposed Area Map for the Project.




. Figure 1: Generations at Green Valley Area Map[1] (Figure courtesy of Ascent)

[1] Figure courtesy of Ascent Environmental Inc.

**Project Description:** The Project proposes a Tentative Subdivision Map (TM22-0001) to construct up to 379 new residential lots (214 age restricted), an approximately 5-acre clubhouse site, nine open space lots, multiple private roads, and a 4-acre park site. The Project will be approximately 280 acres in total area. The new resident population[2] for the Project is approximately 854 persons at build-out, assuming single-family residential dwelling units. All new residential parcels will have a land use designation of either High Density Residential (HDR) or Low Density Residential (LDR).

See Figure 2 for the proposed land use designation for the Project




Figure 2: Proposed Land Use Designations[3]

[2] Based on 1.8 residents per dwelling unit within the Age-Restricted portions, and 2.84 residents per dwelling unit for the remaining areas of the Project.

[3] Figure produced by CTA Engineering and Surveying (2022)

The Project can be accessed from two road connections, A-Drive and C-Drive, off of Green Valley Road. An Emergency Access/Egress (EAE) connection is proposed to connect to Lima Way in the Highland View neighborhood. Two new Emergency Vehicle Access (EVA) roads are also proposed to connect to existing roads in the Green Springs Ranch[4] neighborhood. All roads within the Project are proposed to be access controlled private roads owned and maintained by a Home Owners Association (HOA).

Electrical power supply is provided to the Project by Pacific Gas & Electric (PGE). Unless the Project is developed using only electric, each parcel will have natural gas supplied by PG&E for heat and other fuel needs. Municipal water supply for fire protection and domestic water consumption will be provided by the El Dorado Irrigation District (EID).

END OF CHAPTER

[4] The East Green Springs Ranch EVA would only connect to the Green Springs Ranch community if the Green Springs Ranch Association chooses to complete this extension in the future and at their discretion.

# CHAPTER 2: EXISTING CONDITIONS

## 2.1 Chapter Overview

The Project is located in the unincorporated community region of El Dorado Hills, California. El Dorado Hills is located in the western region of El Dorado County. According to 2021 population statistics[5] for the area approximately 633 existing residents live in the general area of the Project. The Project is located within El Dorado County Supervisory District 1.

The Project is approximately 280 ± acres in size. The Project is currently zoned by the County of El Dorado for low density residential (LDR) use. The Project lands are currently unimproved.

See Figure 3 for a photo of the Project site from the Green Valley Road area.



Figure 3: Existing Condition of the Project Area

[5] See Census Block Data for Areas 060170307093007, 060170307091008, 060170307093009, 060170307093010060170307093011, 060170307093013, 060170307093018, 060170307093011; 2020.

The Project is bordered by the following adjoining properties:

- **South Side** – The Highland View neighborhood is located south of the Project.
- **North Side** – The Hickok Ranch, Arroya Vista and Deer Valley neighborhoods are located north of the Project.
- **East Side** – The Green Springs Ranch neighborhood is located east of the Project.
- **West Side** – The West Green Springs neighborhood is located northwest of the Project.

## 2.2 Vegetation

The Project site is currently unimproved and contains natural vegetation cover. The Project site is located within areas classified as "Grassland" or "Oak Woodland" habitat. See Table 1[6] for the common types of vegetation found on the parcel.

Table 1: Summary of Vegetation Found on the Property

| Scientific Name | Common Name |
|---|---|
| *Quercus douglasii* | Blue Oak |
| *Quercus Lobata* | Valley Oak |
| *Quercus wislizenii* | Interior Live Oak |
| *Bromus diandrus, hordeasceus* | Bromes |
| *Centaurea solstitialis* | Yellow Star Thistle |
| *Hordeum marinum* | Mediterranean Barley |
| Geranium dissectum | Split-Leaf Geranium |
| *Rubas armeniacus* | American Blackberry |
| *Avena Fatua and Avena barbata* | Oats, Grass Family |
| *Eucalyptus globulas* | Blue Gum Eucalyptus |
| *Cynosurus echniatus* | Dogtail Grass |
| *Ceanothus integerrimus var.* | Deer Brush |
| *Ceanothus cuneatus var. cuneatus* | Buck Brush |
| *Pinus sabiniana* | Grey Pine |

[6] For further details see Biological Resources Assessment for the Project prepared by Madrone Ecological Consulting; (April, 2024).

## 2.3 Climate

Fire weather in El Dorado County is typically dominated by three general weather phenomena; the Delta push influence, north wind events, and east foehn winds caused by high pressure development in the Great Basin[7]. All three weather conditions cause potential increases in fire intensity and size. The Delta influence is the most common and occurs frequently throughout the summer.

Characteristically, high pressure systems will dominate Northern California in the summer months bringing extremely hot and dry conditions over much of the region. As these systems develop, they tend to originate near the Delta and Sacramento areas bringing the marine influence to the area. This is generally considered a beneficial condition for fire behavior; slightly cooler afternoon temperatures and increases in relative humidity. However, the downside is the strong winds that typically accompany these patterns which can override any benefit that may come from cool, moist marine air.

This type of wind generally subsides after sundown causing fire behavior to drop off dramatically. The other critical wind patterns that are difficult to predict for El Dorado County are the northerly and easterly winds. They are relatively rare, and often are forecasted only the day before. Northerly or easterly winds are typically warmer and drier than most other wind patterns due to air compression. These conditions provide the perfect environment for increased fire intensity and large fire growth.

Fire growth is typically wind driven, however as these winds subside, fire immediately returns to fuel/topography driven in opposing directions to the wind driven direction. This type of wind event is commonly referred to as a Santa Ana wind in Southern California, and a Foehn wind in the Sierra/Cascade Region.

Predominant local weather patterns in the Project area[8] are characterized by warm, dry summers and cool, wet winters. Dry conditions traditionally begin around the beginning of May and last into late October. An average summer day is 95°- 105° Fahrenheit, winds from the southwest at 0-10 miles per hour, and relative humidity levels in the 15-25 percent range. Summer lightning

[7] See Strategic Fire Plan for Amador El Dorado Unit; 2023; 2023 Strategic Fire Plan Amador El Dorado Unit (ca.gov); P.5.
[8] Ben Bolt Remote Automated Weather Station Site; National Weather Service. Ben Bolt California (dri.edu).

storms are infrequent in the area. On average, the strongest wind speeds in the El Dorado Hills area occur in March through May, but winds can frequently exceed 20 mph throughout the local fire season period.

## 2.4 Topography

The topography in the general area of the Project is classified as being a "foothill" terrain type which transitions from the Central Valley area of California to the Sierra Nevada Mountain range. The existing condition shown on the Tentative Parcel Map indicates that the average slope for the site is approximately 8 - 20% with a maximum slope of approximately 60% in certain open space areas. Elevations within the property range from a low of 900 feet along the northern boundary to a high of 1200 feet found near the southerly boundary. Most of the parcels within the Project have north or east facing aspects.

See Figure 4 for the existing topographic condition of the Project area.

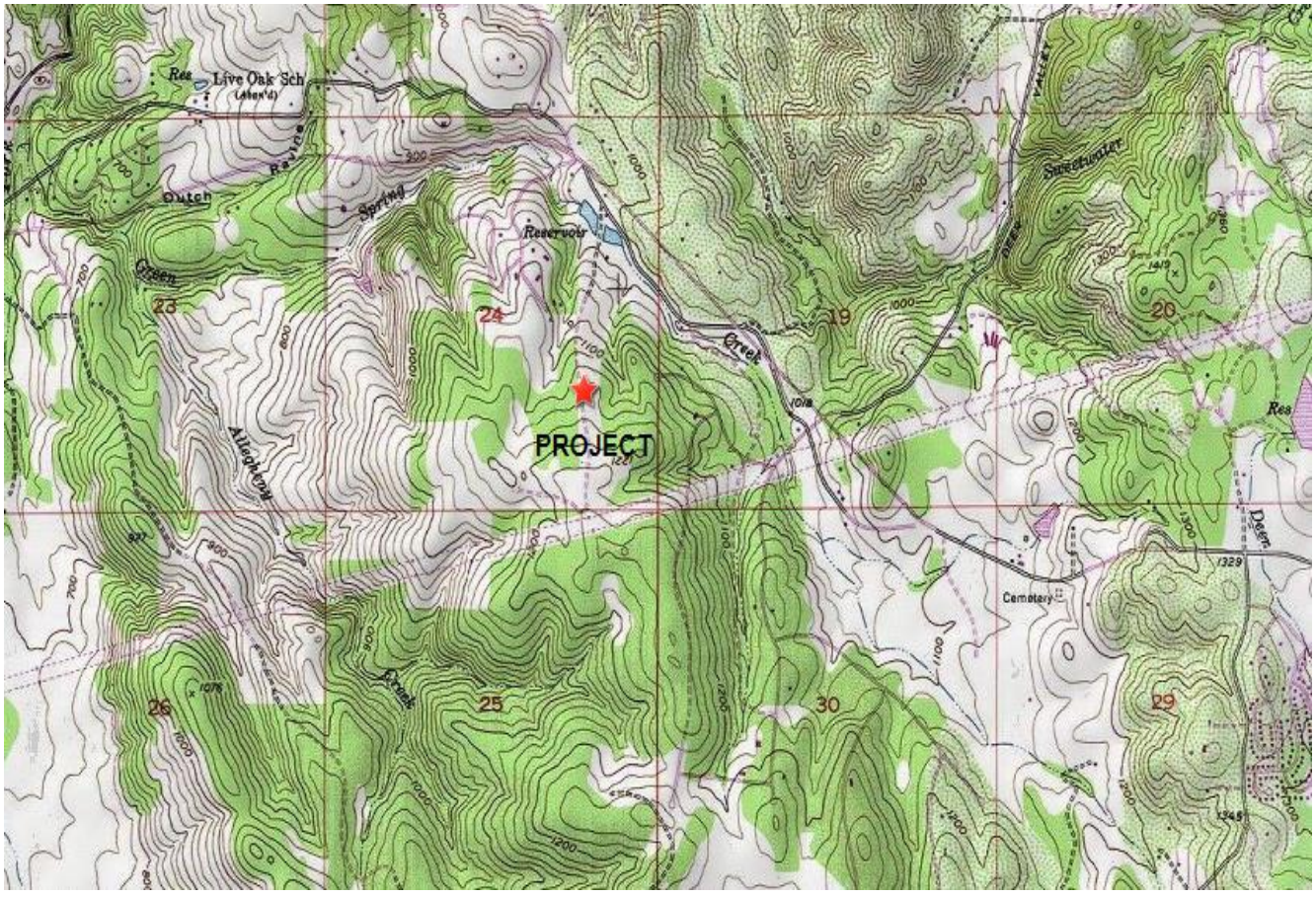



Figure 4: Generations at Green Valley Project Topographic Map

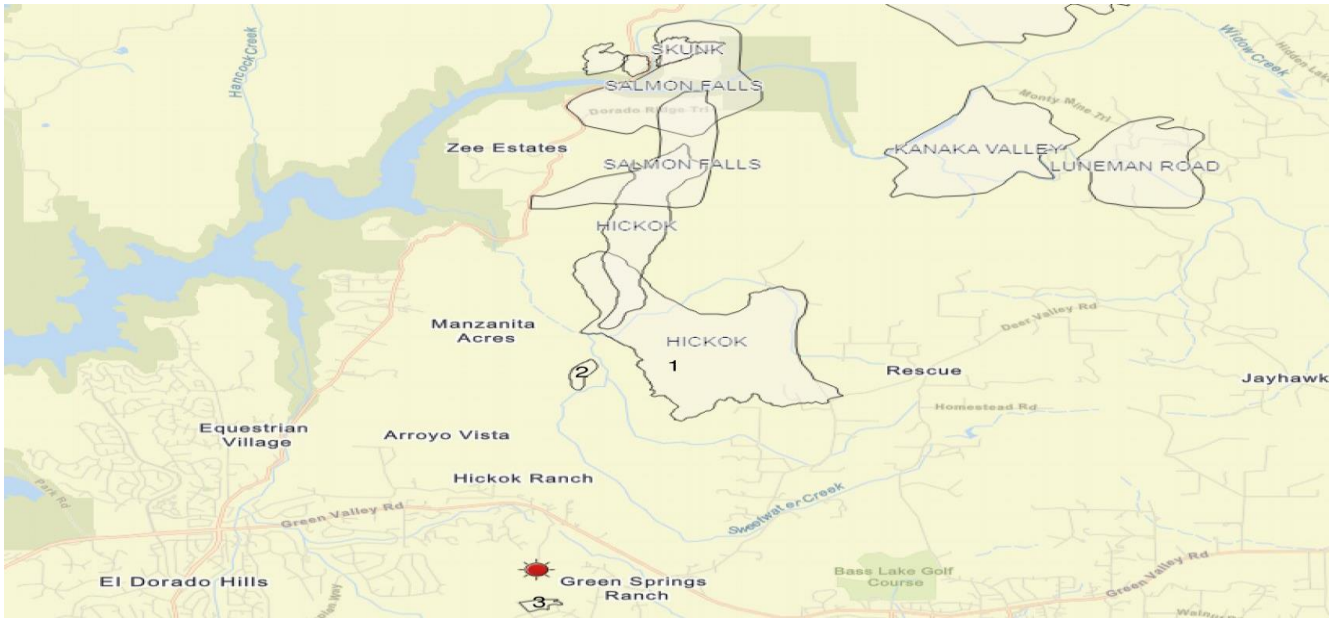
## 2.5 Existing and Planned Land Use Pattern

The current land use of the Project is unimproved. An existing Sacramento Municipal Utility District (SMUD) 230 kV transmission powerline, and a Pacific Gas & Electric 230kV transmission powerline, cross the Project near the southern boundary within an established easement. The Project proposes a Tentative Subdivision Map (TM22-0001) to construct up to 379 new residential lots (214 age restricted), an approximately 5-acre clubhouse site, nine open space lots, multiple private roads, and a 4-acre park site. The Project will be approximately 280 acres in total area.

## 2.6 Fire History

According to CAL FIRE statistics the majority of wildland fires that have occurred in the western El Dorado County area was ignited from one of the following sources: debris burning (34%), Undetermined (14%), Equipment (13%), Vehicle (9%) and Other (9%) causes.[9] Debris and Open Burning was the Number 1 cause of vegetation fires in the El Dorado Hills and surrounding communities in the area in 2022.

Figure 5 describes the significant wildland fire history in the vicinity of the Project area.




**LEGEND**

1. Hickok Fire, August 30, 2002, Size - 776 acres, Cause - Arson
2. Hickok Fire, June 26, 1997, Size - 294 acres, Cause - Miscellaneous
3. Ethel Fire, July 6, 2001, Size - 10 acres, Cause - Equipment Use

Figure 5: Large Wildfire History in the Project Area (1910-2022)

[9] *Strategic Fire Plan Amador ○ El Dorado ○ Sacramento ○ Alpine Unit,* (2023); P.57.

Several large wildfires (>300 acres) have been reported within 5 miles of the Project area between 1910 – 2022. The Project site has not been directly impacted within this reporting period. Lack of historical fire does not, by default, translate to low fire hazard. The absence of fire activity in the interface community contributed to significant fuels build up. The fuels built up together with the severe lack of precipitation and strong winds can all contribute to severe fire behavior that can cause the loss of life and structure destruction.

## 2.7 Fire Hazard Severity Zone Designation

The term Fire Hazard refers to the dangerous accumulation of flammable fuels in open space areas and other wildland urban interface areas (WUI). It is typically described at the landscape (area) level, usually referring to the density of live or dead vegetation that may be ignited by the various fire risks or causes that can increase a fires intensity or rate of spread. Fire hazard is based on the vegetation types likely to be present over the next 50 years that contribute to fire severity and ember production, the topography of the area and the average fire weather conditions present in the area.

Fire Hazard ratings are provided by CAL FIRE as part of their *Fire Hazard Zone Severity Mapping* program. One of the major hazards in the western El Dorado County region is the threat of a disastrous wildfire endangering both people and property. The Project is also located within a designated[10] Wildland Urban Interface (WUI) community identified by the Federal Government as being at risk from a large wildfire due to fire behavior potential and values at risk.

The area is vulnerable to the threat of wildfire throughout the year subject to a variety of conditions including, but not limited to:

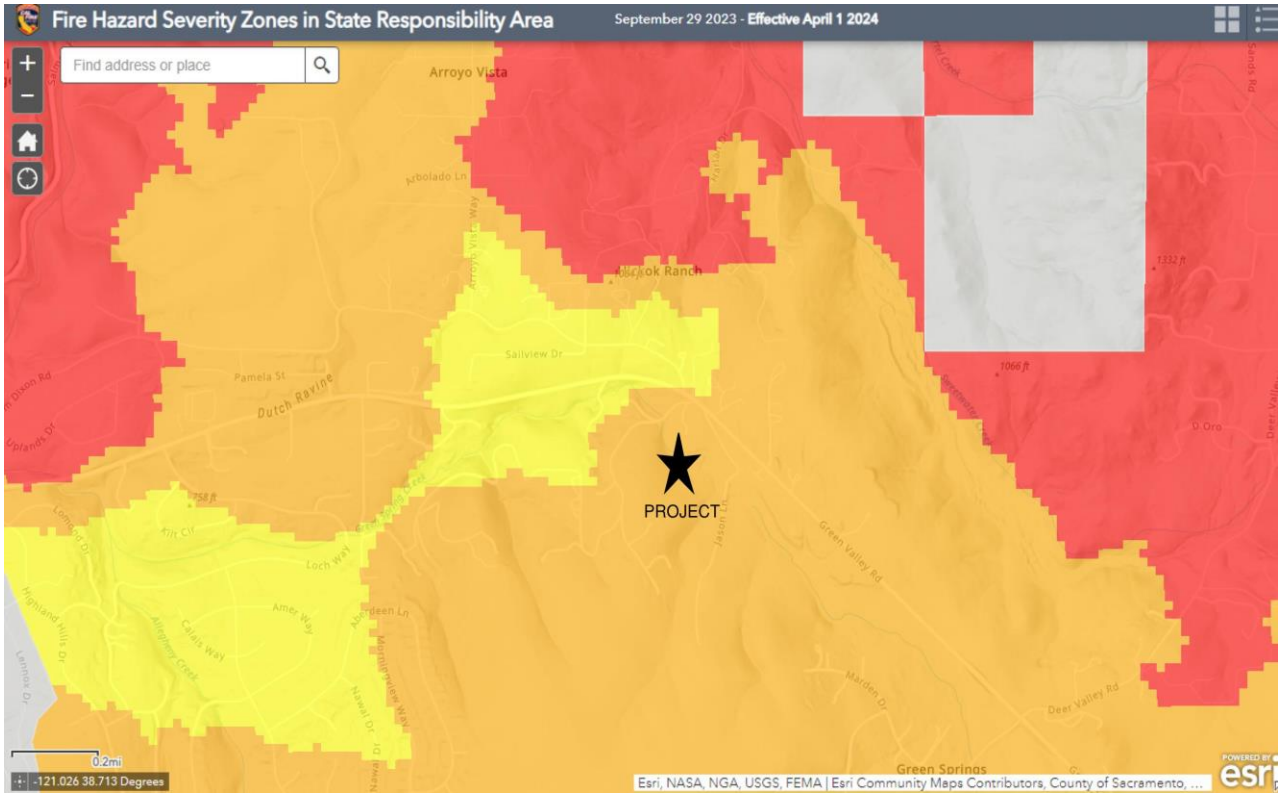
- Daily weather conditions such as air temperature, humidity, wind speed and direction.
- Climatic conditions such as drought, extended seasonal periods of hot, dry weather typically found in the summer and fall months, or seasonal rains typically found in the winter and spring months.
- Fuel moisture and growth cycle periods, especially in fine fuels such as the herbs and shrubs that are prevalent in the area.

[10] Federal Register *Urban Wildland Interface Communities within the Vicinity of Federal Lands that are at High Risk from Wildfires; (January, 2001);* Federal Register :: Urban Wildland Interface Communities Within the Vicinity of Federal Lands That Are at High Risk From Wildfire

- Human caused ignition factors such as arson, escaped debris burns and unsafe equipment operation.

The Project area is located within a State Responsibility Area (SRA) for fire management. The current CAL FIRE Hazard Severity Zone[11] Map for El Dorado County identifies the Project as being inside a **High Fire Hazard Severity Zone.** Lands approximately ½ mile northwest of Project are identified as being within a Moderate Fire Hazard Severity Zone. Land approximately ½ mile north of the Project, in the Hickok and Deer Valley communities, are identified as being in a Very-High Fire Hazard Severity Zone. The unimproved lands north and east of the site, extending into the Pine Hill Preserve area and Salmon Falls area, and the open space areas within the Project, pose the most likely worst-case wildfire risk to the future community.

See Figure 6 for the Fire Hazard Map information for the Project and surrounding community.




**LEGEND**

**Yellow** State Responsibility Area (SRA) Moderate Fire Hazard Severity Zone

**Orange** State Responsibility Area (SRA) High Fire Hazard Severity Zone

**Red** State Responsibility Area (SRA) Very-High Fire Hazard Severity Zone

Figure 6: Fire Hazard Severity Zone Map for the Generations at Green Valley (2024)

[11] CAL FIRE; Fire Hazard Severity Zone Map for El Dorado County (April, 2024); Fire Hazard Severity Zones in State Responsibility Area - El Dorado County (azureedge.net).

## 2.8 Fire and Emergency Response

Fire, rescue, and pre-hospital emergency medical services for the El Dorado Hills community is provided by the El Dorado Hills Fire Department (EDHFD)[12]. EDHFD is a career staffed fire department which operates five staffed fire stations and serves an area of approximately 78 square miles. EDHFD utilizes no less than twenty-one firefighters and paramedics to staff these fire stations on a 24-hours-per-day, seven-days-per-week operational schedule.

The closest staffed EDHFD fire station to the Project is Station 84 on Francisco Drive. This station is approximately 2.62 miles west of the Project. Station 84 is staffed with a crew of 3 firefighters on a year-round basis.

CAL FIRE operates one fire station in the El Dorado Hills region to meets its wildfire suppression and prevention mission. This fire station is located at CAL FIRE Station 70 in the Pilot Hill area and is approximately 13.5 miles from the Project. CAL FIRE staffs two state funded fire engines with a crew of 3-4 firefighters on a seasonal basis from this location.

The closest paramedic ambulance to the Project is located at El Dorado Hills Station 85, and has an average emergency response time of less than eight minutes to the Project.

The Project is located within an Insurance Service Office (ISO) Class 3 rating area. EDHFD emergency response travel times for the first arriving unit to the Project are, on-average, less than 8 minutes[13]. These response times are consistent with El Dorado County General Plan Policy 5.1.2.2[14] which calls for an average response time to emergency calls of less than eight minutes in community region areas.

See Table 3 for additional information on local fire station locations and distance to the Project.

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[12] See El Dorado Hills Website; HOME - El Dorado Hills Fire Department (edhfire.com); accessed February 29, 2024.

[13] Response times are based on an average 90 second turnout time by firefighters from their station plus travel time using the closest roads available to the project. The response time standard the county uses to evaluate the adequacy of the project meeting General Plan Policy 6.2.3.1 are based on the closest station (Station 84) only, and not the average response times of all resources responding to an incident.

[14] See *El Dorado County General Plan*, 2004; Public Services and Utilities Element Section, P.91.

| Table 3: Fire Station Data for Project | | | |
|---|---|---|---|
| **Fire Station Identification** | **Address** | **Travel Distance to Project** | **Staffed Year Round** |
| EDHFD Station 84 | 4680 Golden Foothills Pkwy.<br>El Dorado Hills | 2.62 Miles | Yes |
| EDHFD Station 85 | 1050 Wilson Boulevard<br>El Dorado Hills | 5.37 Miles | Yes |
| EDHFD Station 86 | 3670 Bass Lake Road<br>El Dorado Hills | 5.38 Miles | Yes |
| CAL FIRE Station 70 | 4731 Pedro Hill Road<br>Pilot Hill | 13.50 Miles | No[15] |
| CAM Station 88 | 2961 Alhambra Drive<br>Cameron Park | 3.68 Miles | Yes |

During a major emergency incident such as a building fire, wildland fire, hazardous materials spill, or similar event it is likely that EDHFD and CAL FIRE will dispatch multiple fire station crews to assist in controlling the incident. It is probable that five or more fire suppression units would be dispatched from multiple fire stations located in the western El Dorado County region.

Figure 7 shows the regional locations of the five closest fire stations to both the Project and El Dorado Hills community.

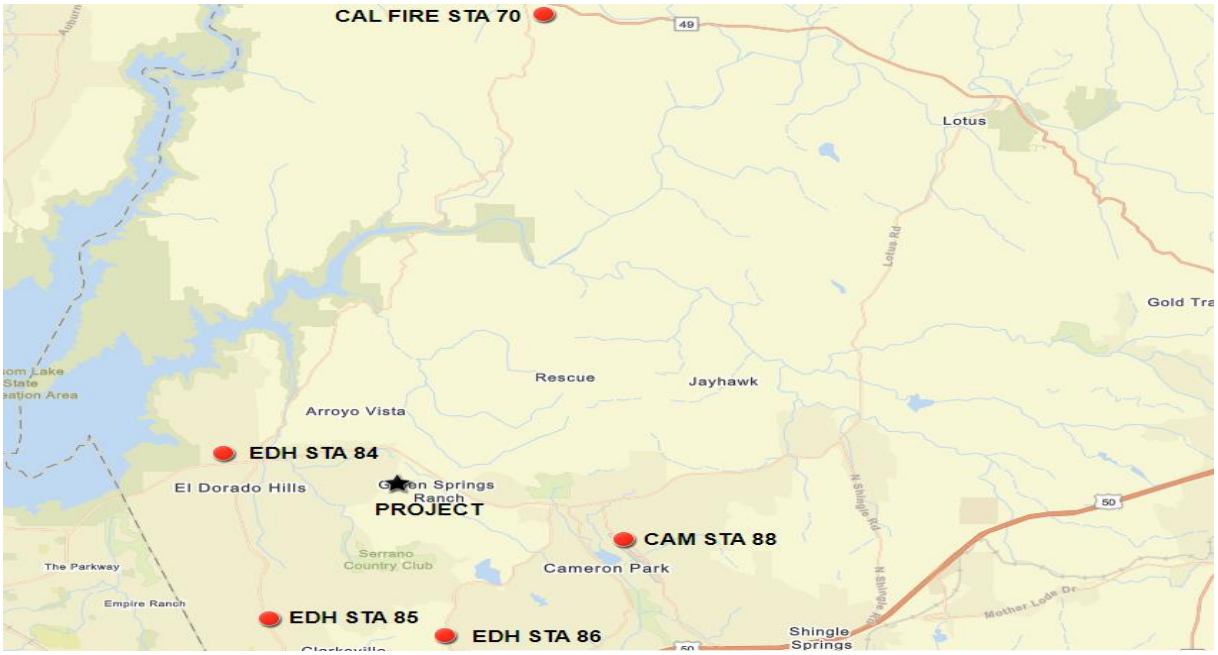


Figure 7: Staffed Fire Stations Near Project

[15] CAL FIRE Station 70 is a seasonal wildland fire station operated by CAL FIRE typically between April-October.

A joint EDHFD, CAL FIRE, and local fire agency emergency response to the Project will occur along the Green Valley Road corridor. Three fire stations (84, 85, and 70) are located west or north of the Project; while two fire stations (88, 86) are located east or south of the Project. The closest paramedic ambulance to the Project is located at El Dorado Hills Station 85, and has an average emergency response time of less than eight minutes to the Project.

## 2.9 Emergency Ingress and Egress

The existing travel route to the Project site is currently by Green Valley Road which is a collector road that serves the El Dorado Hills, Cameron Park, Rescue and Shingle Springs on the northern end of those communities. Green Valley Road is a two-lane road in the vicinity of the Project site. It connects to Sacramento County on the west side of the Project, and to North Shingle Springs Road on the east side of the Project.

See Figure 8 for a map for the Project and surrounding areas.

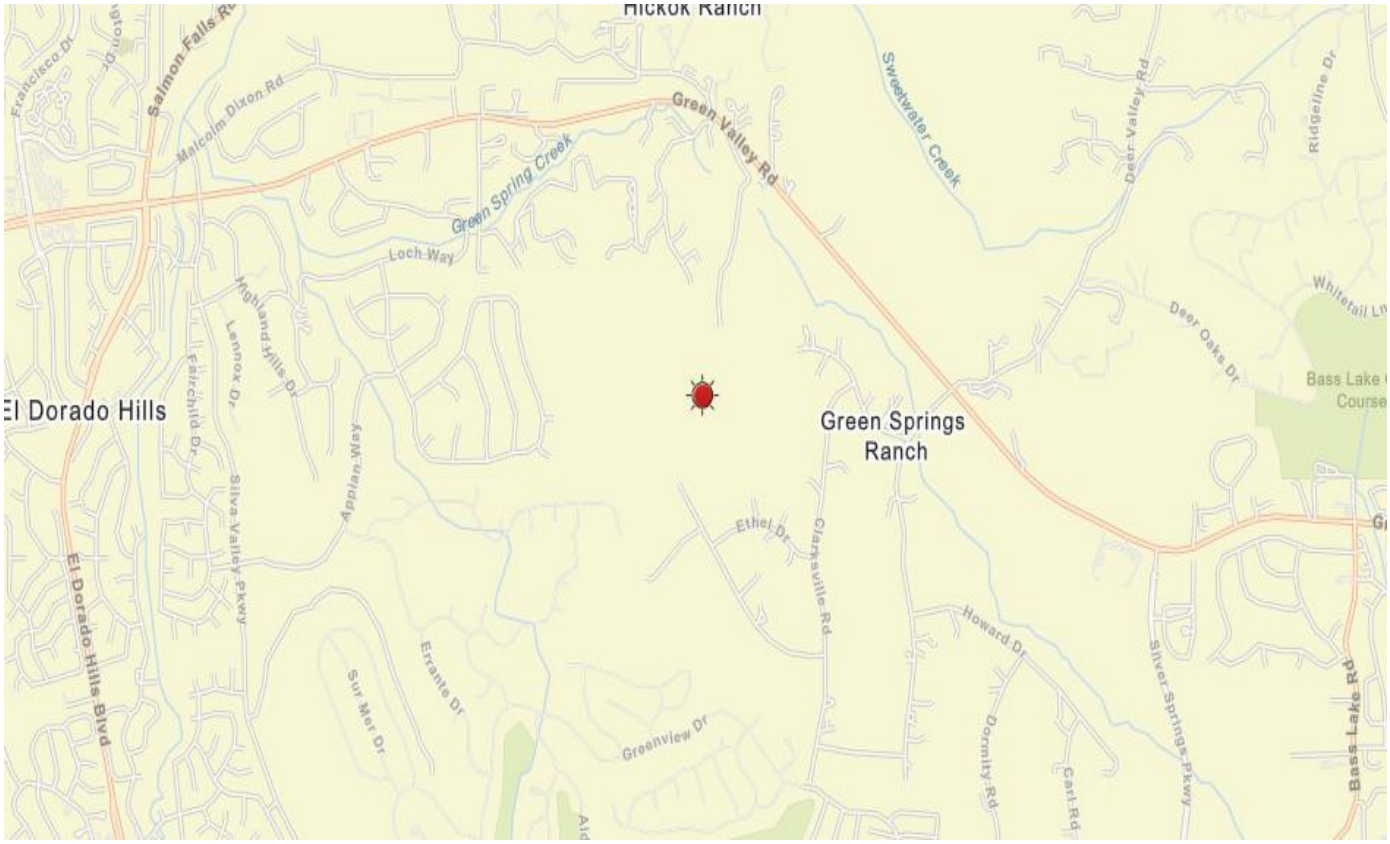


Figure 8: Generations at Green Valley Area Map

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# Chapter 3: REGULATORY SETTING

## 3.1 Chapter Overview

Development of the proposed Project will be subject to federal and state laws, County ordinances and regulations. The key provisions that would address hazards and emergencies within the FSP are summarized below, and, in some cases, reproduced in the appendices.

The County of El Dorado, through its General Plan[16], has identified natural hazards that include severe weather, seismic and geological events, landslides, flooding, and wildfires, as the highest vulnerability to County residents. A review of the information[17] provided in the General Plan shows the Project as being at greatest risk to the threat of a wildfire. The focus of the FSP will be to address efforts to reduce the wildfire threat within the Project and surrounding areas.

## 3.2 El Dorado County General Plan

The El Dorado County General Plan[18] contains two sections that provide public safety policy guidance related to the Project. Chapter 5 (Public Services and Utilities Element) and Chapter 6 (Health and Safety Element). Chapter 5 was last amended in December, 2015. Chapter 6 was last updated by the County in August, 2019.

The following Public Services and Utilities Element polices of the County are applicable to the proposed Project:

**Policy 5.1.2.2**. Provision of public services to new discretionary development shall not result in a reduction of service below minimum established standards to current users, pursuant to Table 5-1.

**Policy 5.1.2.3.** New development shall be required to pay its proportionate share of the costs of infrastructure improvements required to serve the project to the extent permitted by State law. Lack of available public or private services or adequate infrastructure to serve the project

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[16] See *El Dorado County General Plan Public - Health, Safety and Noise Element*; (2019)
[17] ibid
[18] See El Dorado County General Plan (2004); Adopted General Plan (edcgov.us); accessed August 31, 2023.

which cannot be satisfactorily mitigated shall be grounds for denial of any project or cause for the reduction of size, density, and/or intensity otherwise indicated on the General Plan land use map to the extent allowed by State law.

**Policy 5.1.2.4.** Service standards for public services and emergency services in Rural Centers and Rural Regions are different than in Community Regions based on lower intensity and density of land use.

**Policy 5.2.1.2**. An adequate quantity and quality of water for all uses, including fire protection, shall be provided for with discretionary development.

**Policy 5.7.2.1.** Prior to approval of new development, the responsible fire protection district shall be requested to review all applications to determine the ability of the district to provide protection services. The ability to provide fire protection to existing development shall not be reduced below acceptable levels as a consequence of new development.

**Policy 5.7.4.1**. Prior to approval of new development, the applicant shall be required to demonstrate that adequate medical emergency services are available and that adequate emergency vehicle access will be provided concurrent with development.

**Policy 5.7.4.2**. Prior to approval of new development, the Emergency Medical Services Agency shall be requested to review all applications to determine the ability of the department to provide protection services. The ability to provide protection to existing development shall not be reduced below acceptable levels as a consequence of new development. Recommendations such as the need for additional equipment, facilities, and adequate access may be incorporated as conditions of approval.

In addition, the Health and Safety Element of the General Plan includes the following policies regarding fire protection within El Dorado County:

**Policy 6.2.1.1**. Implement Fire Safe ordinance to attain and maintain defensible space through conditioning of tentative maps and in new development at the final map and/or building permit stage.

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**Policy 6.2.1.2**. Coordinate with the local Fire Safe Councils, California Department of Forestry and Fire Protection, and federal and state agencies having land use jurisdiction in El Dorado County in the development of a Countywide fuels management strategy.

**Policy 6.2.2.1**. Fire Hazard Severity Zone Maps shall be consulted in the review of all projects so that standards and mitigation measure's appropriate to each hazard classification can be applied. Land use densities and intensities shall be determined by mitigation measures in areas designated as high or very high fire hazard.

**Policy 6.2.2.2.** The County shall preclude development in areas of high and very high wildland fire hazard or in areas identified as wildland-urban interface (WUI) communities within the vicinity of Federal lands that are a high risk for wildfire, as listed in the Federal Register Executive Order 13728 of May 18, 2016, unless such development can be adequately protected from wildland fire hazard, as demonstrated in a WUI Fire Safe Plan prepared by a qualified professional as approved by the El Dorado County Fire Prevention Officers Association. The WUI Fire Safe Plan shall be approved by the local Fire Protection District having jurisdiction and/or California Department of Forestry and Fire Protection. (Resolution 124- 2019, August 6, 2019)

**Policy 6.2.3.1.** As a requirement for approving new development, the County must find, based on information provided by the applicant and the responsible fire protection district that, concurrent with development, adequate emergency water flow, fire access, and firefighting personnel and equipment will be available in accordance with applicable State and local fire district standards. Public Health, Safety, and Noise Element El Dorado County General Plan Page 114 (Amended August 2019) July 2004

**Policy 6.2.3.2**. As a requirement of new development, the applicant must demonstrate that adequate access exists, or can be provided to ensure that emergency vehicles can access the site and private vehicles can evacuate the area.

**Policy 6.2.3.4**. All new development and public works projects shall be consistent with applicable State Wildland Fire Standards and other relevant State and federal fire requirements.

**Policy 6.2.4.1**. Discretionary development within high and very high fire hazard areas shall be conditioned to designate fuel break zones that comply with fire safe requirements to benefit the new and, where possible, existing development.

## 3.3 Tentative Map and Parcel Map Requirements in the SRA

California Government Code § 66474.02 requires that a legislative body of a County make specific findings before approving a tentative map, or a parcel map for which a tentative map was not required, for an area located in the State Responsibility Area (SRA) or Local Responsibility Area (LRA) VHFHSZ. The findings must show that that the subdivision is consistent with regulations adopted by the State Board pursuant to Sections 4290 and 4291 of the Public Resources Code (PRC) or consistent with local ordinances certified by the State Board as meeting or exceeding the State regulations.

The County must also submit a copy of the findings to the State Board. Certain tentative maps or parcel maps for purposes of open space and conservation are exempt, as specified in the statute. The findings described above must be made in order to approve a tentative or parcel map. Even if the lead agency adopts a statement of overriding considerations for a proposed project, or if the lead agency determines a project to be exempt to CEQA, the substantive requirements in the Government Code regarding fire protection must be satisfied. Information on how to submit these subdivision maps to the State Board can be found in the California Code of Regulations (CCR), Title 14, §§ 1266.00, 1266.01, and 1266.02.

## 3.4 Fire Safe Regulations

**California Public Resource Code (PRC) Section 4290.** The State Board of Forestry has the authority to adopt regulations for minimum fire safety standards applicable to SRA lands under the authority of the department, and to VHFHSZs. The Fire Safe regulations are codified in CCR, Title 14 (Natural Resources), Division 1.5 (Department of Forestry), Chapter 7 (Fire Protection) under Subchapter 2 (SRA Fire Safe Regulations), §§ 1270-1276. These regulations generally address the following:

- Standards for signs identifying streets, roads, and buildings.

- Minimum private water supply reserves for emergency fire use.
- Fuel modification standards for fuel breaks and greenbelts.
- Road and driveway standards for emergency fire equipment access and public evacuation.

They do not supersede local regulations that equal or exceed minimum regulations adopted by the State (PRC § 4290(c).

**California Building Standards Code**

The State of California has adopted a minimum model code for use within all 58 counties of the State. These provisions can be found within California Code of Regulations Title 24 – Parts 1 through 12. The code is updated on a triennial basis with the last update occurring on January 1, 2023.

The California Building Standards Code is a compilation of three types of building standards from three different origins:

- Building standards that have been adopted by state agencies without change from building standards contained in national model codes;
- Building standards that have been adopted and adapted from national model codes to address California's ever-changing conditions; and
- Building standards, authorized by the California legislature, that constitute amendments not covered by national model codes, that have been created and adopted to address particular California concerns.

All occupancies in California are subject to national model codes adopted into Title 24, and occupancies are further subject to amendments adopted by state agencies and ordinances implemented by local jurisdictions' governing bodies.

## 3.5 Defensible Space Regulations

**California PRC Section 4291 / Government Code (GC) Section 51182.** These State statue and regulatory provisions define and describe mandatory fire protection measures and responsibilities for maintaining defensible space that apply to all property within the SRA in

California. Per GC § 51182, defensible space regulations also apply to all property in the VHFHSZ within the Local Responsibility Area (LRA).

The defensible space requirements include, but are not limited to, the following:

- 100 feet minimum of vegetation management ("defensible space") around homes
- Removal of dead/dying vegetation
- Vegetation removal around chimneys/stovepipes

Depending on the area, defensible space requirements may include certain exemptions and exceptions from code. Moreover, jurisdictions may require extension of the minimum distance beyond property lines or as needed for insurance. The State Board provides direction for complying with the defensible space regulations in CCR Title 14, §§ 1299.01- 1299.05 which incorporates by reference additional information outlined in the State Board's General Guidelines for Creating Defensible Space. Due to the recent passage of AB 3074 (2020), defensible space compliance will soon require more intense fuel reduction activities and the creation of an ember-resistant zone within 5 feet of a structure. The State Board will provide additional guidance and must amend the regulations to reflect these changes on or before January 1, 2023.

### El Dorado County Code Chapter 8.09

The County of El Dorado has more restrictive requirements, in some cases, than State statutes and regulations pertaining to Defensible Space around homes and buildings. El Dorado County Codes and Ordinances Chapter 8.09 pertains to all requirements and administrative actions associated with Vegetation Management and Defensible Space. The purpose of this chapter is to provide for the removal of hazardous vegetation and combustible materials situated in the unincorporated areas of the County so as to reduce the potential for fire and to promote the safety and welfare of the community. The chapter applies to all improved parcels and designated unimproved parcels within the County, and establishes annual on-going maintenance of those parcels to prevent vegetation from growing back and posing a fire hazard to the community.

## 3.6 Other Plans and Regulations

**El Dorado County Local Hazard Mitigation Plan.**

The County of El Dorado last updated its Local Hazard Mitigation Plan (LHMP) in April, 2019[19]. The purpose of the LHMP is to guide hazard mitigation planning to better protect the people and property of the County from the effect of hazard events. Based on a comprehensive risk assessment the LHMP identified that it is vulnerable to several hazards. The threat of wildfire was among those hazards identified as posing the highest risk to the communities and population within the County.

The wildfire risk assessment provisions within the LHMP are described within Section 3.2.15. Wildfires are identified within the LHMP[20] as highly likely to occur within all areas of the County. Prolong dry seasons, warmer temperatures created by climate change, drought and tree mortality are all significant factors in the increased risk of wildfire occurring in the County.

**California Governor's Office of Planning and Research - Fire Hazard Planning Technical Advisory**

This planning guide is one in a series of technical advisories provided by the Governor's Office of Planning and Research (OPR) as a service to professional planners, land use officials, and California Environmental Quality Act (CEQA) practitioners. OPR issues technical guidance on issues that broadly affect land use planning, including the application of CEQA. The advisory was published in August, 2022.

The goal of this technical advisory is to provide a robust planning framework for addressing fire hazards, reducing risk, and increasing resilience across California's diverse communities and landscapes. To accomplish this goal, it is essential that local agencies (i.e., cities and counties) develop and incorporate effective policies and implementation programs in their general plans and integrate their general plans with other relevant hazard and risk reduction policies, plans, and programs. This advisory provides guidance on those policies and programs, and is also

[19] See El Dorado County Local Hazard Mitigation Plan; ElDoradoCounty_LHMP.pdf (edcgov.us); accessed August 31, 2023.
[20] ibid

intended to assist city and County planners in discussions with professionals from fire hazard prevention and mitigation, disaster preparedness, and emergency response and recovery agencies as they work together to develop effective fire hazard policies for the general plan.

### El Dorado Hills County Water District Ordinance 2022-01 (Fire Code)

The El Dorado County Water District (EDHCWD) has adopted the 2022 California Fire Code (CFC) with several local amendments which are more restrictive than those described in the CFC. EDHCWD updates its local fire code ordinance in conjunction with the triennial update to the California Building Standards Code. Specific local amendments contained within the ordinance that may impact the Project include the following:

- Fire apparatus access road design criteria as described in Section 503.2.1
- Dead end roads and driveways as described in Section 503.2.5
- Fire lane marking requirements described in Section 503.3.1
- Security gate design criteria as described in Section 503.6
- Address identification criteria as described in Section 505.1
- LP-Gas storage tank limits as described in Section 6104.2
- Residential fire sprinkler system installation requirements found in Chapter 80.
- Fire-Flow requirements for buildings as described in Appendix B
- Fire Apparatus access road design criteria described in Appendix D.

### El Dorado Hills County Water District Ordinance 2023-01 (Unimproved Parcel Maintenance)

EDHCWD has adopted local regulations related to Hazardous Vegetation Management on Unimproved Parcels located throughout the district. Specific provisions contained within the ordinance that may impact the Project include the following:

- Hazardous vegetation maintenance on unimproved parcels that are one (1.0) acre in size or smaller
- Hazardous vegetation maintenance on unimproved parcels over one-acre (1.01) in size or larger

- Unimproved parcels known to contain, or that the property owner believes, may contain habitat for rare, threatened, or endangered plant or animal species
- Duty of property owner to abate fire hazards on their property
- Acceptable methods of clearance of hazardous vegetation and combustible materials
- Reoccurring fire hazards
- Penalties for violating the ordinance

In addition, the El Dorado County Fire Chiefs Association has created several Fire Protection Standards, as permitted by the California Fire Code, to clarify certain provisions of the Code and their application locally. See Chapter 8 – Appendix F of this FSP for a list of these local standards.

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# CHAPTER 4: FIRE PROTECTION PLANNING

## 4.1 Chapter Overview

The purpose of this Chapter is to describe the recommended fire prevention and emergency planning best practices for the Generations at Green Valley Project. This Chapter is consistent with nationally recognized and accepted practices for safeguarding life and property from the hazards of fire and other dangerous conditions associated with a wildfire and/or urban conflagration. This Chapter is based on a Project-specific wildfire hazard and risk assessment as described in California Fire Code Section 4903 and includes analysis on the following subjects:

- Emergency Vehicle Access Requirements
- Road and Address Signage Requirements
- Emergency Water Supply Requirements
- Applicable Building Codes and Standards for Wildfire Safety
- Fire Protection System Requirements

## 4.2 Wildfire Hazard and Risk Assessment Factors

The threat of wildfire exposure to people, critical infrastructure, buildings, and communities is based upon a comprehensive vulnerability assessment of an area. This vulnerability assessment is usually completed through the evaluation of both *fire hazard* and *fire risk* factors. The term "hazard" describes the density of live or dead vegetation that may be ignited by the various fire risks or causes that can increase a fire's intensity or rate of spread such as topography or weather conditions. The term "risk" describes the potential damage a fire can due to buildings, critical assets/infrastructure, and other values at risk in individual open space areas and other wildland urban interface areas.

Landowners, managers, and fire officials need to consider the potential fire hazard and risk factors that may make their community vulnerable to a wildfire when making land management and development decisions in fire-prone areas[21]. This assessment also aids fire agencies in the preparation of pre-incident plans and resource deployment actions such as fire equipment

[21] Wildfire Hazard and Risk Assessment, United Nations Office for Disaster Risk Reduction, 2017

staffing levels and resource placement during critical fire periods. This assessment should consider the factors described in Table 4 when assessing the wildfire exposure potential for an area:

Table 4: Hazard and Risk Assessment Factors

| Hazard Assessment Factors | Risk Assessment Factors |
|---|---|
| • Landscape level vegetation (fuel) types<br>• Landscape level topography<br>• Weather conditions present during seasonal and critical fire weather periods<br>• Prior fire history in the area<br>• Ember / firebrand spread potential<br>• Other criteria as determined by CAL FIRE | • Subdivision design points<br>• Site vegetation (fuel) types<br>• Site topography<br>• Defensible Space measures<br>• Building construction materials used<br>• Roofing materials used<br>• Local fire protection capabilities<br>• Fire protection water sources<br>• Utilities<br>• Critical assets / infrastructure at risk |

## 4.3 Wildfire Vulnerability Assessment for the Project

The fire risk factor scoring for the Project is described in Table 3. The overall risk rating can be described as Low (0-39), Moderate (40-59), High (60-74) and Very-High (75+). When analyzing individual fire risk factor ratings within the Project area the following terms are used:

- **LOW RISK** – Fire risk factors present typically do not support rapid fire spread.
- **MODERATE RISK** – Fire risk factors present may support moderate fire spread, but burning ember distribution is limited to less than ½ mile.
- **HIGH RISK** – Fire risk factors present may support rapid fire spread and ember distribution beyond ½ mile.
- **VERY-HIGH RISK** – Fire risk factors present may support extreme fire spread and intensity.

NOTE: No **Very High-Risk** factors are currently identified within the Project area.

See Table 5 and the subsequent description below for additional analysis on the fire risk rating for the Project.

Table 5: Fire Risk Rating[22] for the Generations at Green Valley Project

| No. | Risk Factor | Low | Moderate | High | Very-High | Total |
|---|---|---|---|---|---|---|
| | | 0-3 | 4-6 | 7-8 | 9-10 | |
| 1 | Subdivision Design Points | 3 | | | | 3 |
| 2 | Vegetation Fuel Type | | 6 | | | 6 |
| 3 | Defensible Space | | 6 | | | 6 |
| 4 | Site Topography | | 6 | | | 6 |
| 5 | Building Construction Materials | | 6 | | | 6 |
| 6 | Roofing Materials | 3 | | | | 3 |
| 7 | Fire Protection – Water Source | 3 | | | | 3 |
| 8 | Fire Protection – Fire Department Capability | 3 | | | | 3 |
| 9 | Utilities | 3 | | | | 3 |
| 10 | Critical Assets / Infrastructure at Risk | 0 | | | | 0 |
| | Total | 15 | 24 | 0 | 0 | 39 |

Overall Wildfire Risk Rating: **Low** (39)

The fire risk factors associated with the *Subdivision Design Points* are considered "**Low**" based on the current site plan design. The Project is accessed via two access controlled road connections (A-Drive, C-Drive) to Green Valley Road on the north side of the Project. Green Valley Road is a public road maintained by the County of El Dorado. The Project is accessed by an Emergency Access/Egress (EAE) connection to Lima Way on the south side of the Project. This EAE will be designed and operated as a second access road connection for both emergency responders, and civilians during an evacuation, in accordance with EDHCWD Fire Code Section D107.2. Two additional EVAs for emergency vehicle use only are provided within the Project. All roads within the Project will be designed in accordance with EDHFD and CAL FIRE emergency vehicle access requirements.

[22] Based on the 2023 ICC Wildland Urban Interface Code. Additional risk factors such as defensible space, fire department capacity and critical assets/infrastructure at risk are also evaluated as part of this risk assessment based on local fire agency requirements. The rating scale has been simplified to describe a range of between 0-10 for ease in describing the overall risk score.

The fire risk factors associated with the *Vegetation Fuel Types* are considered "**Moderate**" based on the current site plan design. The primary vegetation types found in the Project area today pose the threat of rapid fire spread during long dry periods of the year. The Project will contain approximately 57.6 acres of open space lands. The wildfire mitigation measures described in Chapter 6 will reduce the fire risk to nearby buildings when implemented by the HOA.

The fire risk factors associated with *Defensible Space* are considered "**Moderate**" for the Project. Preparedness actions such as ensuring that adequate defensible space meeting the requirements found in State and Local regulations, along with on-going wildfire fuel reduction practices established with this FSP on undeveloped sections of the Project, will limit the risk of a wildfire damaging buildings within this Project and surrounding communities.

The fire risk factors associated with *Site Topography* are considered "**Moderate**" for the Project. All parcels established within this Project have average slopes of less than 20%. Open space lots adjacent to the residential lots may have slopes up to 60%. The Project is located on north and east aspects. These factors, along with the vegetation fuel described previously, will lead to rapid fire spread conditions during heightened fire danger periods.

The fire risk factors associated with *Building Construction Materials* are considered "**Moderate**" for the Project. The risk of building-to-building ignition during a wildfire is present due to the close proximity of the buildings (<30 feet) proposed within the Project. All new buildings constructed within the Project will utilize materials and construction methods (e.g. Class A roof cover, vent screening, ignition-resistant construction, etc.) for exterior wildfire exposure as described in in California Building Code Chapter 7A and this FSP.

The fire risk factors associated with *Roofing Materials* are considered "**Low**" for the Project. All new buildings built within the Project will be provided with a Class A Roof as required by El Dorado County Code Section 110.16.110. The design of each roof assembly shall comply with California Building Code Section 705A and this FSP.

The fire risk factors associated with *Fire Protection – Water Source* are considered "**Low**" for the Project. The Project will be provided with a municipal water supply system meeting the fire protection requirements for all buildings within the Project.

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The fire risk factors associated with *Fire Protection – Fire Department Capability* are considered "**Low**" for the Project. The Project site is currently served by EDHFD and CAL FIRE. Emergency response times to the Project site are consistent with the average response time standards for community region areas established by the County of El Dorado.

The fire risk factors associated with *Utilities* are considered "**Low**" for the Project. All electrical power distribution lines serving the Project will be buried underground reducing the wildfire risk in the subdivision. Unless the Project is developed using only electric, each parcel will have natural gas supplied by PG&E for heat and other fuel needs.

The fire risk factor associated with *Critical Assets / Infrastructure at Risk* sites in the Project should be considered "**Low**" for the Project. The Project as proposed contains one value and assets identified within Chapter 8 – Appendix A.

It is important to remember that the risk factor ratings described do not imply that a community is at greater or lower risk due to its overall rating. Fires can, and do, cause significant damage to property and buildings even when they occur in areas that may receive an overall low or moderate rating. Failure to maintain adequate defensible space, critical fire weather conditions and/or lack of available fire suppression resources due to other emergency incidents may cause a fire to increase its intensity and fire spread beyond the capabilities of firefighters on scene.

## 4.4 Emergency Vehicle Access Requirements

Emergency vehicle access is an important element of the FSP for the Project area. Emergency vehicle access can be described as the means (e.g., roads, bike paths, trails, etc.) by which firefighters can enter an area to quickly mitigate a wildfire incident before it spreads to adjacent properties and critical assets / infrastructure at risk. Joint efforts to develop and maintain ingress/egress for local evacuation and fire suppression response are required to ensure that both public and firefighter safety is provided.

See Figure 9 for additional information on the gated access, EVA and EAE locations within the Project, and Section 5.2 for a further description on the multiple evacuation route options.

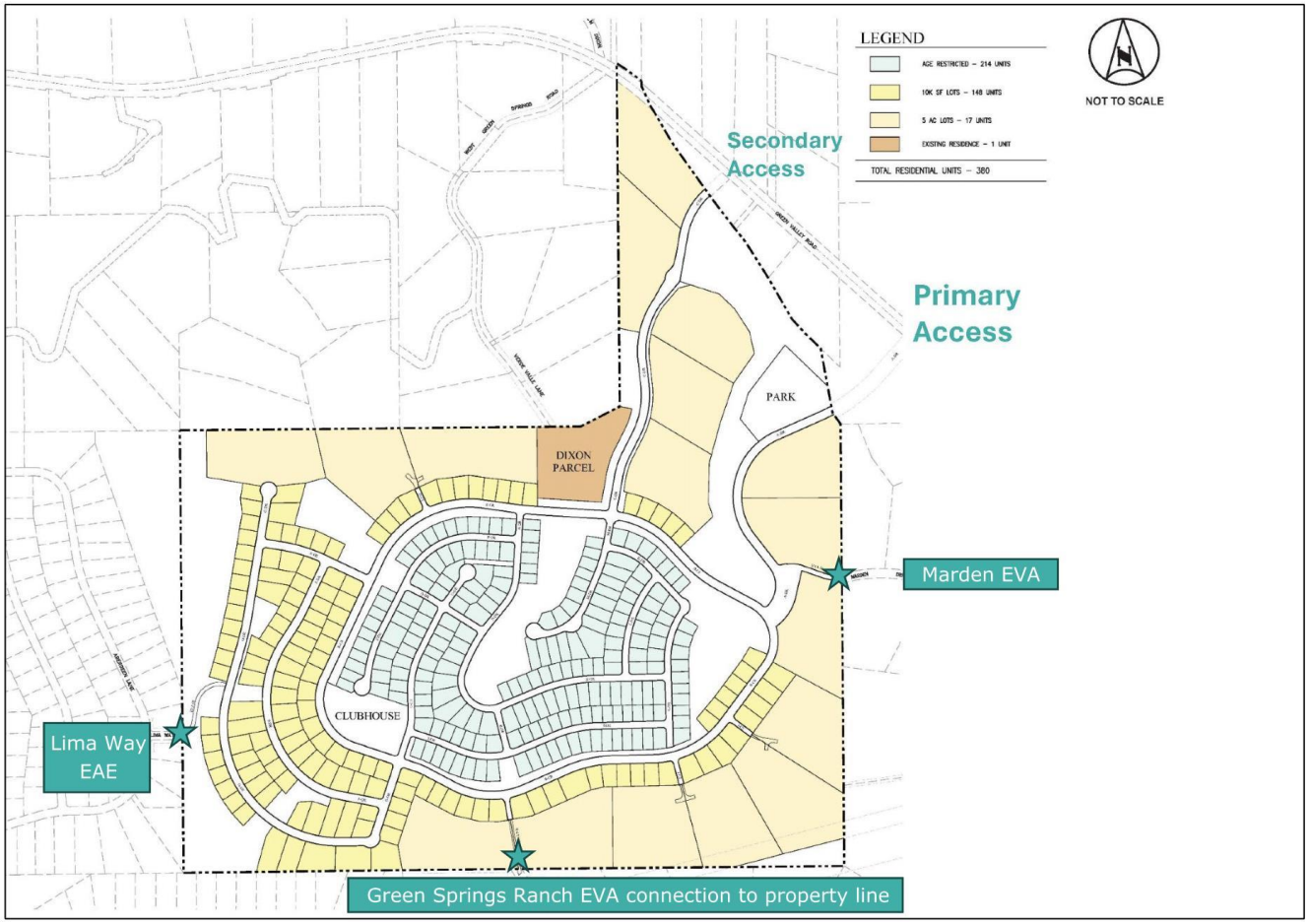


Figure 9: Generations at Green Valley Project Entrances (Figure Courtesy of DKS Associates)

The main entry/exit point and emergency response routes to the Project will be A-Drive, identified in Figure 9 as being the east entrance off of Green Valley Road. This intersection will be controlled via a new traffic signal that will be installed with the Project. Emergency vehicle access is also available from Green Valley Road via C-Drive, identified as the west entrance off of Green Valley Road. Civilian vehicle turning movements from this connection are limited to right-in/right-out only[23].

The EAE connection to Lima Way will be designed and operated as a second emergency vehicle access road connection and will allow for civilians use during an evacuation in accordance with EDHCWD Fire Code Section D107.2 (Access Remoteness). This EAE will connect the Project to the Highland View community. An automatic gated entry is proposed for this location. The gated entry shall comply with the applicable automatic gate design criteria

[23] The final design of this traffic calming measure shall allow for emergency vehicle movement from all directions as required by EDHFD.

described in El Dorado County Code Section 130.30.090 (D) and EDHFD Standard No. B-002 (Automatic Gates on Fire Apparatus Roads).

The Marden Road, and East Green Springs Road connections are EVA use only road connections located on the east side of the Project. Both EVAs connect to the Green Springs Ranch community. The East Green Springs EVA would only connect to the Green Springs Ranch community if the Green Springs Ranch Association chooses to complete the extension in the future and at their discretion.

All roads serving the project shall meet the emergency vehicle access requirements described in Chapter 8 – Appendix D, F, and G along with the provisions described in California Code of Regulations Title 24 – Part 9 (California Fire Code).

No speed bumps, speed humps, speed control dips, etc. shall be permitted on emergency vehicle access roadways. All other traffic calming devices shall be prohibited unless approved by EDHFD as required by CFC 503.4.1.

Each lot will be accessed by a private driveway connection. Driveways shall be constructed to meet the following minimum standards:

- Driveways serving as the primary means for emergency vehicle access shall be provided to within 150-feet of all portions of the building.

- Driveways shall provide not less than 12-feet of unobstructed road width, not including shoulders, throughout the entire length of the road. An unobstructed horizontal clearance from vegetation of not less than 10-feet along both sides of the driveway, and a vertical unobstructed clearance of 15-feet, shall be provided along the length of the driveway.

- Driveways exceeding 150-feet in length, but less than 800-feet, shall provide a turnout near the midpoint of the driveway. Where the driveway exceeds 800-feet turnouts shall be provided no more than 400-feet apart.

- Turnouts shall be a minimum 12-feet in width and 30-feet in length with minimum 25-foot tapered ends.

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- Driveways shall be designed and maintained to support the imposed live load of not less than 40,000 pounds gross vehicle weight for emergency vehicle access. A report, prepared by a geotechnical or civil engineer, verifying the ability of the road to bear the required minimum weight shall be submitted with any plan indicating the construction of fire apparatus access roads. Verification of constructed roadway shall be provided by a geotechnical or civil engineer prior to the final inspection of the project.

- Turns in fire apparatus access roads shall have a minimum 40-foot inner and 56-foot outer turning radius.

- Approach and departure angles in fire apparatus access roads shall not exceed 5% over a distance of 5-feet.

- A turnaround shall be provided on driveways over 150-feet in length and shall be within 50-feet of the building.

See Chapter 8 – Appendix D for further analysis on how the project complies with the fire safe provisions required by California Code of Regulations (CCR) Title 14 – Sections 1270-1275.

## 4.5 Road and Address Signage Requirements

Newly constructed or approved roads shall be identified by a name or number through a consistent system that provides for sequenced or patterned numbering and/or non-duplicative naming as approved by the County of El Dorado. Road signs shall be visible and legible from both directions of vehicle travel for a distance of at least one hundred (100) feet. Road signs shall meet the following criteria:

- Road signs shall be placed at the intersection of roads.
- Road sign assemblies shall be constructed of non-combustible materials.
- The road sign background shall be of a reflective material and of a contrasting color to the address numbers or letters.
- Road numbers or letters shall be of a reflective material, of a contrasting color to the sign background, and with a height of not less than 4-inches and with a width of ½-inch stroke.
- Spacing between road numbers or letters shall be between ½-inch and 1-inch.

- Road signs shall be installed a minimum of 7-feet above the traveled way.

A sign identifying traffic access or flow limitations, including but not limited to, weight or vertical clearance limitations, dead-end roads, one-way roads, or single lane conditions shall be placed:

- At the intersection preceding the traffic access limitation, and
- No more than one hundred (100) feet before such traffic access limitation.

All buildings within the Project shall be issued an address by the County of El Dorado which conforms with the overall address system. Utility and miscellaneous buildings are not required to have a separate address. The address installation, location and visibility on the building shall meet the requirements found in CCR Title 24, Part 9 (Fire Code), Section 505 and EDHFD Standard No. B-001 (Addressing of Buildings). Building address signs shall meet the following additional criteria as required by EDHFD:

- Address numbers on each residential building shall be either internally or externally illuminated.

When the building address is located more than 150-feet from the road serving the Project the address sign shall be placed at the driveway entrance onto the parcel. The address sign shall meet the following additional criteria:

- Signs shall be mounted between 4-feet and 7-feet above grade.
- Posted no further than 5-feet from either the driveway or roadway travelled way, and on the same side of the road as the serviced driveway.
- Oriented perpendicular to the direction of travel on the roadway and legible from both directions of travel on the driveway.
- Address numbers shall be reflective and contrasting in color to the sign background, and with a number height of not less than 4-inches and with a stroke width of 1/2-inch.

## 4.6 Fire Protection Water Supply Requirements

Section 1275.02 (Water Supply) of California Code of Regulations Title 14 (Fire Safe Regulations), and Section 507 (Fire Protection Water Supplies) of California Code of Regulations

Title 24 – Part 9 (California Fire Code), both require an approved water supply that is capable of supplying the required fire flow for fire protection for all new buildings hereafter constructed. As the number of buildings and their square footages is not known at this date the following general information on required fire flows is the only data currently available for analysis. The required fire flows for determining the water supply needs for the project are described in Table 6.

Table 6: Fire-Flow Requirements[24] for the Project

| Fire-Flow Calculation Area (square feet) | Automatic Sprinkler System Type | Minimum Fire-Flow (gallons per minute)[25] | Flow Duration (hours) |
|---|---|---|---|
| 0-3,600 | CFC 903.3.1.3[26] | 1,000 | 1 |
| 3,601 and greater | CFC 903.3.1.3 | ½ Value in CFC Table B105.1 (2) | 2 |

The Project is located in an area of El Dorado Hills that has adequate water supply capabilities for fire protection available to it. The municipal water service provider for the El Dorado Hills area is the El Dorado Irrigation District (EID). The Project will be served by a large municipal water tank storage system operated by EID that is just south of the Project site in Highland View.

The Project will install a municipal water supply system using fire hydrants supplied by EID for fire protection purposes. This water supply system will be capable of meeting and/or exceeding the Project minimum fire-flow requirements of no less than 1,000 GPM @ 20 pounds per square inch gauge (PSIG) for a 1-hour duration as identified in the California Fire Code (CFC). Fire hydrants meeting EID, EDHFD and CAL FIRE requirements will be spaced on average every 500-feet along both public and private roads serving the Project in accordance with the CFC

## 4.7 Building Siting and Setbacks

All parcels within the Project must provide a minimum 30-foot setback for all buildings from all property lines and/or the center of a road, as required by CCR Title 14 - § 1276.01 (a). The purpose of this setback requirement is to reduce the intensity of a wildfire through structure-

[24] "Fire Flow" is the flow rate of a water supply, measured at 20 pounds per square inch (psi) residual pressure, that is available for firefighting.

[25] CFC Appendix Section B103.2 authorizes the fire code official to increase the fire-flow requirements when conditions indicate an unusual susceptibility to group fires or conflagrations.

[26] See NFPA Standard 13D (*Standard for the Installation of Sprinkler Systems in One and Two-Family Dwellings and Manufactured Homes)* as amended by the State of California in Title 24 – Part 9, Chapter 80.

to-structure ignition sources. A reduction of this minimum setback is permitted by this regulation in some cases[27].

The following specific alternative material and construction methods, exceeding the minimum criteria described in CBC Chapter 7A, shall be implemented within the Project to meet the "Practical Effect" principles described in CCR Title 14 - §1276.01 when buildings are located within 30-feet of property lines to reduce the potential for building-to-building fire spread may include, but are not limited to[28], the following provisions:

- Block any spaces between roof decking and the Class A roof covering to prevent embers from catching and igniting the building; and

- Eaves shall be enclosed on the underside with non-combustible material, ignition-resistant material, or minimum two (2) inch lumber; and

- Exterior walls shall be constructed with non-combustible building materials such as stucco, fiber cement, stone, or brick, and comply with California Code of Regulations Title 24, Part 2, Chapter 7A, Section 707A; and

- Use WUI ember and flame-resistant vents, conforming with the requirements described in ASTM E2886, to protect exterior wall openings when the wall is located within 30-feet of another building or faces the Wildland Fuel Reduction Zone areas. Dryer vents shall be metal and equipped with a louver or flap; and

- Exterior windows, skylights, glazed doors, and glazed openings within exterior doors shall be multi-paned with at least two (2) tempered panes, minimum twenty (20) minute fire rated, or fire-resistant glass block units. Shutters installed over windows shall be non-combustible; and

- Areas under first floor bay windows shall be enclosed with non-combustible walls; and

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[27] CCR Title 14 - § 1276.01(b) does allow for a reduction in the minimum setback based upon findings that support the practical reason for the reduction and alternative methods are implemented to reduce building-to-building ignition.

[28] The Project will comply with all applicable state and local code and regulatory requirements to achieve "Practical Effect" at the time of issuance of the building permit.

- Exterior doors of buildings shall be non-combustible, or have a non-combustible exterior storm door, and comply with California Code of Regulations Title 24, Part 2, Chapter 7A, Section 708A ; and

- A minimum non-combustible area of 6 vertical inches, measured from the ground up (at grade) and from any attached horizontal surface like a deck, shall be provided on the exterior of all buildings. Non-combustible materials can include brick, stone, fiber-cement siding, or concrete; and

- Fencing materials located within 5-feet of a building shall be constructed of non-combustible materials. Areas located between 0-feet and 5-feet from all buildings shall remain non-combustible. Back-to-back, combustible fencing shall be separated by a minimum of five (5) feet; and

- Landscape materials and other vegetation located within 0'-100' of dwellings shall comply with the fire-resistant standards of EDHFD and CAL FIRE; and

- Accessory and miscellaneous structures, as defined in the California Building Code, located within the reduced fire setback zone shall comply with this plan and California Code of Regulations Title 24, Part 2, Chapter 7A, Section 710A; and

- Decks, including posts, joists, railing, stairs, and walking surfaces, shall be non-combustible and comply with California Code of Regulations Title 24, Part 2, Chapter 7A, Section 709A; and

- Projections shall be non-combustible, ignition resistant, or one (1) hour fire-rated in accordance with IWUIC, Section 503.2, and/or NFPA 1144, Section 5.2; and

- Gutters and downspouts shall be of non-combustible material. Gutters shall be provided with a non-combustible leaf guard.

See EDHFD Standard No. 7 (Residential Setback for Structure Defensible Space) for additional information.

Fencing materials adjacent to non-irrigated open space areas shall be constructed of non-combustible materials.

CCR Title 14 - §1276.02 requires local jurisdictions to identify "Strategic Ridgelines", for all land use projects to reduce the fire risk and improve fire protection in the community. All new parcels being created by this Project are not located in a potential ridgeline area. EDHFD has confirmed that no strategic ridgelines are proposed at this time within the Project boundaries.[29]

## 4.8 Applicable Building Codes and Standards for Wildfire Safety

New buildings constructed within the Project will comply with the current requirements of the California Building Code (CBC). All residential dwellings in the Project shall be provided with an approved automatic fire sprinkler system, as required by State law and County of El Dorado Planning & Building Department requirements. Accessory buildings, detached garages, outdoor living space buildings, and other miscellaneous buildings located on the property shall be constructed in accordance with the current CBC requirements to reduce the risk of a fire spreading to the primary buildings on-site. See Chapter 8 – Appendix E for additional details regarding local building department requirements. For general building construction standards for new residential dwellings refer to the current California Building Standards Code located at: Codes (ca.gov).

Single-family dwellings, storage buildings and accessory buildings constructed within the Project shall be constructed and maintained in accordance with the current design standards found in *California Building Code (CBC) Chapter 7A* (**Materials and Construction Methods for Exterior Wildfire Exposure**). Examples of where construction methods and other development activities shall meet the ignition resistant requirements found in this Chapter include, but are not limited to, the following:

- Class A roof assembly with a Class A roof covering, fire resistant valley flashing, and an approved means to prevent the accumulation of leaves and debris in roof gutters.
- Ventilation openings into enclosed attics, enclosed eave soffit spaces, enclosed rafter spaces and underfloor ventilation openings.

[29] Phone communication with EDHFD Fire Prevention Specialist Marshall Cox, September 27, 2023.

- Exterior wall materials, decks, porches, balconies, stairs, and other projections.
- Roof eaves and exterior porch ceilings.
- Exterior windows, doors, glazing and skylights.
- Accessory buildings and miscellaneous buildings located within 50' of another building.

Construction activities shall comply with California Fire Code (CCR T24 - Part 9), Chapter 33 (Fire Safety During Construction and Demolition) as required by EDHFD and CAL FIRE. The relevant provisions found in this Chapter of the fire code include:

- Section 3303 - Development of a Site Safety Plan
- Section 3304 - Temporary Heating Equipment
- Section 3305 - Precautions Against Fire
- Section 3306 - Flammable and Combustible Liquids
- Section 3307 - Flammable Gases
- Section 3308 - Explosive Materials
- Section 3309 - Portable Generators
- Section 3310 - Fire Reporting
- Section 3311 - Required Access for Emergency Vehicles
- Section 3313 - Water Supply for Fire Protection
- Section 3316 - Portable Fire Extinguishers
- Section 3317 - Motorized Construction Equipment

## 4.9 Fire Protection System Requirements

All buildings within the Project are required to comply with the applicable fire protection system requirements described in CFC Chapter 9. An approved automatic fire sprinkler system is required by these regulations within all new single-family buildings within the Project. The design of these fire sprinkler systems shall conform with CFC 903.3.1.2 (NFPA 13D Sprinkler Systems). The installation of these systems within buildings shall conform with the design and installation standards of EDHFD.

Smoke and Carbon Monoxide alarm devices shall be provided in all occupied living areas of each building as described in CFC Sections 907.2.11 and 915.

END OF CHAPTER

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# CHAPTER 5: EMERGENCY PREPAREDNESS AND PRE-EVACUATION PLANNING

## 5.1 Chapter Overview

The purpose of this chapter is to describe the community evacuation planning analysis for the Project and surrounding neighborhoods in the event of an evacuation warning or order being issued by local officials of a local wildfire or similar event. See Chapter 8 - Appendix C for additional details.

This Chapter is based on a Project-specific hazard and risk assessment as described in Chapter 4, and includes analysis on the following subjects:

- Community Evacuation Types and Decision Making
- Community Evacuation Routes
- Pre-Identified Community Wildfire Safety Zones
- Emergency Evacuation Shelters
- Emergency Evacuation Education Materials
- Emergency Notification

## 5.2 Community Evacuation Types and Decision Making

The California Office of Emergency Services (CALOES) defines the term evacuation to mean "the organized, phased, and supervised withdrawal, dispersal, or removal of civilians from dangerous or potentially dangerous areas and their reception and care in safe areas." The decision to initiate a local evacuation during a wildfire emergency rests with the public safety agencies (law enforcement and fire) based on a comprehensive threat assessment made in the field. The implementation and enforcement of evacuation orders rests with law enforcement.

Evacuation types typically focus on one or more of the following methods:

- Evacuation Warnings Issued by Public Safety Officials
- Evacuation Orders Issued by Public Safety Officials

- Pre-Identified Wildfire Safety Zones when evacuating the community is not practical
- Temporary Refuge Area / Shelter in Place decisions made by residents/visitors

The principal goal of a wildfire evacuation is to protect the public from the threat of a wildfire without injury or death.[30] To achieve this goal the objectives of a manageable and successful evacuation by the public include the following:

- Immediate identification of a wildfire threat and constant awareness of the fire behavior that may impact your location;
- Receiving emergency alerts and communications from public safety officials and responding to their directions in an appropriate fashion;
- Recognizing the need to depart from the area in a judicious and prepared departure;
- Safely and competently evacuating to an area outside a hazardous area;

## 5.3 Generations at Green Valley Pre-Evacuation Planning

The County of El Dorado does not currently make its community evacuation plans for the El Dorado Hills area available to the public for review. However, multiple evacuation options are available from the project site and, in the event of emergency, the evacuation route will be determined by the Public Safety Officials at the emergency scene based on numerous considerations, including the location of the fire. As part of the environmental review, the County of El Dorado County Sheriff's Department, Office of Emergency Services (County OES) will also review the Project, and the Fire Safe Plan, and evaluate any potential impacts to the existing emergency evacuation routes.

The Project has completed a *Wildfire Evacuation Study* that has been prepared by DKS Associates on April 8, 2024. See Appendix L for additional details regarding that analysis. Government Code Section 65302.15 requires cities and counties to identify evacuation routes and locations "*under a range of emergency scenarios*." The capacity, safety, and viability of evacuation routes associated with the project must be analyzed against the range of emergency scenarios to ensure that it does not impair the implementation of an adopted emergency response plan or evacuation plan.

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[30] See *Literature Review of the State-of-the-Science in Wildfire Evacuation* (2022); Marin Wildfire Prevention Authority.

The Project site is not subject to substantial hazards other than wildfire. Compliance with federal, state, county and local regulations will ensure that risks associated with seismic events, flooding, geological conditions, and hazardous materials are minimized. The evacuation study analysis that has been performed for the Project does not evaluate compounding disasters (e.g. simultaneous wildfire and hazardous materials incidents) or cascading effects (e.g. phone communication disruption during a wildfire).

The FSP information below does not ensure that wildfires or evacuation routes will unfold precisely as depicted nor does it identify the evacuation routes to be taken by the public during an evacuation order. Evacuation orders and evacuation route designation are the purview and responsibility of the El Dorado County Sheriff's Department. A wildfire scenario that results in changes to the factors described below may result in different outcomes.

The wildfire scenario and associated planning and modeling created for the Project are designed to require significant activation of evacuation routes, resources, and locations. The analysis makes no assumptions regarding the use of temporary areas of refuge or shelter-in-place strategies to protect residents and visitors within the project. The wildfire scenario parameters are based on three conditions associated with the project that can be pre-planned for during the evacuation planning efforts: [1] fire hazard severity zone; [2] prior large fire history in the area; and [3] hazardous vegetation types present in the area within and surrounding the project.

To stress the evacuation analysis the following worst case wildfire scenario factors are proposed as part of the FSP:

- The wildfire originates north of the project area in the general vicinity of Hickok Road.
- The ignition occurs on a Saturday in October between 2:00 pm and 4:00 pm.
- The weather conditions present at the time include Dry Bulb Temperatures between 70-90° F; Relative Humidity between 10-14%; Midflame Wind Speeds of 30 M.P.H. from the North; Live Fuel Moisture of 50%.
- The predominant fuel type found in the area is Fuel Model 4 (Chaparral).
- Average topographical slopes in the area are between 0 (Flat) to 20 (Mild) percent.

Using the Behave Plus[31] 6.0 computer program, and the factors described above, the scenario anticipates rapid fire spread south towards Green Valley Road and the project between 30-60 minutes after ignition. Maximum rate of fire spread south towards the project will be between 0 and 386 chains[32] per hour (Ch/h).

See Figure 10 for the proposed wildfire scenario for the evacuation analysis.

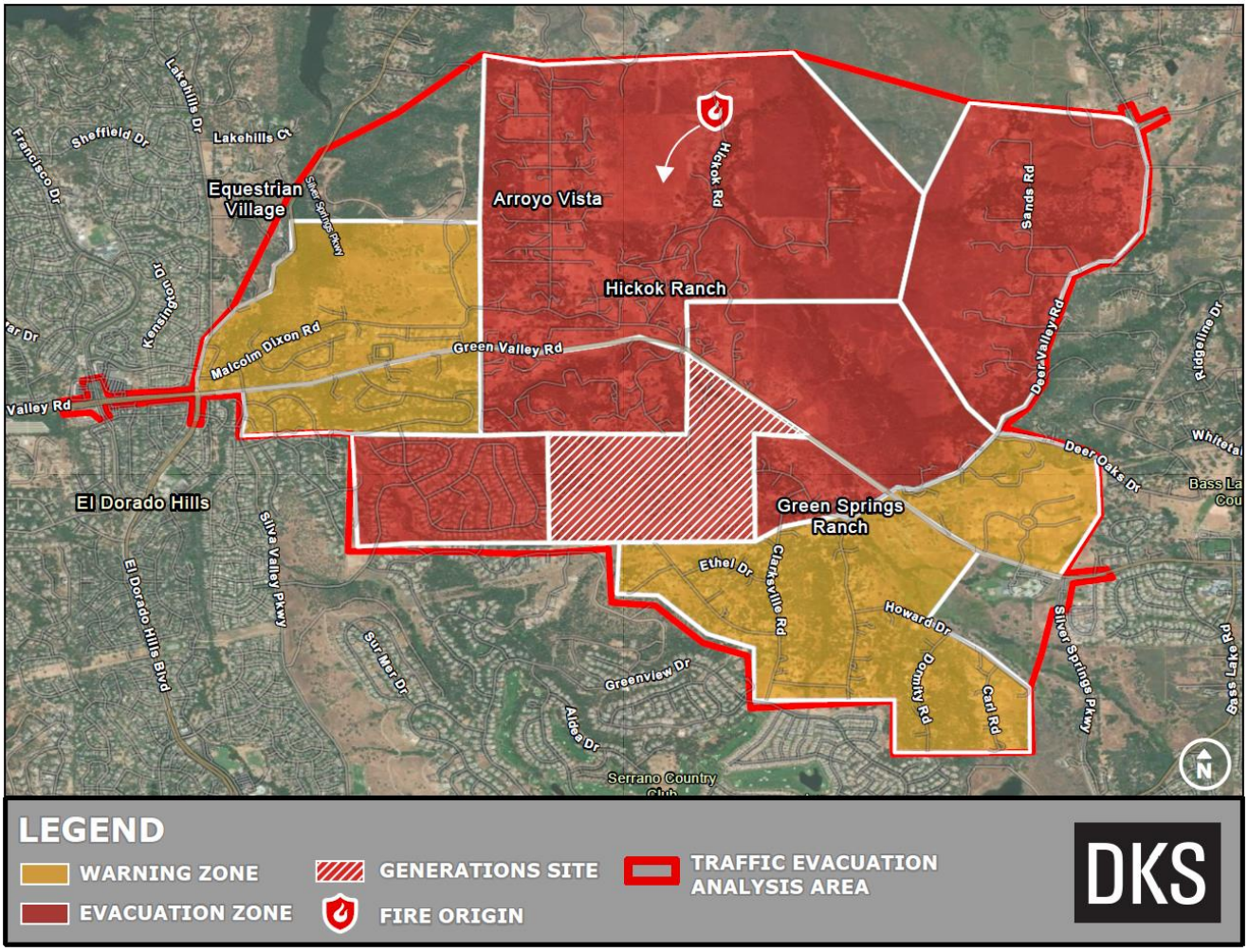


Figure 10: Proposed Wildfire Evacuation Scenario (Courtesy of DKS Associates)

The fire behavior modeling performed for this scenario assumes in the first hour that [1] no active fire suppression efforts[33] occur and [2] no large barriers (e.g., roads, greenbelts, water features) slow the spread of the wildfire south and east. Weather conditions present do not moderate

[31] Behave Plus is a Windows-based fire modeling system for estimating fire behavior and fire characteristics.
[32] The rate of spread is measured in chains. One chain equals 66 feet in length.
[33] It is anticipated that the immediate priorities for first responders would be to focus on civilian evacuations and structure defense efforts.

during the projected time period. The total acreage destroyed by the wildfire during the first 60 minutes using the modeling is estimated to be up to 2,500 acres. This wildfire scenario envisions dangerous rates of fire spread as the fire approaches the project area. In addition, significant ember cast conditions may lead to numerous small fires burning in and around homes and private property simultaneously in the fire area.

See Figure 11 for an area map with the available evacuation routes for the Project.

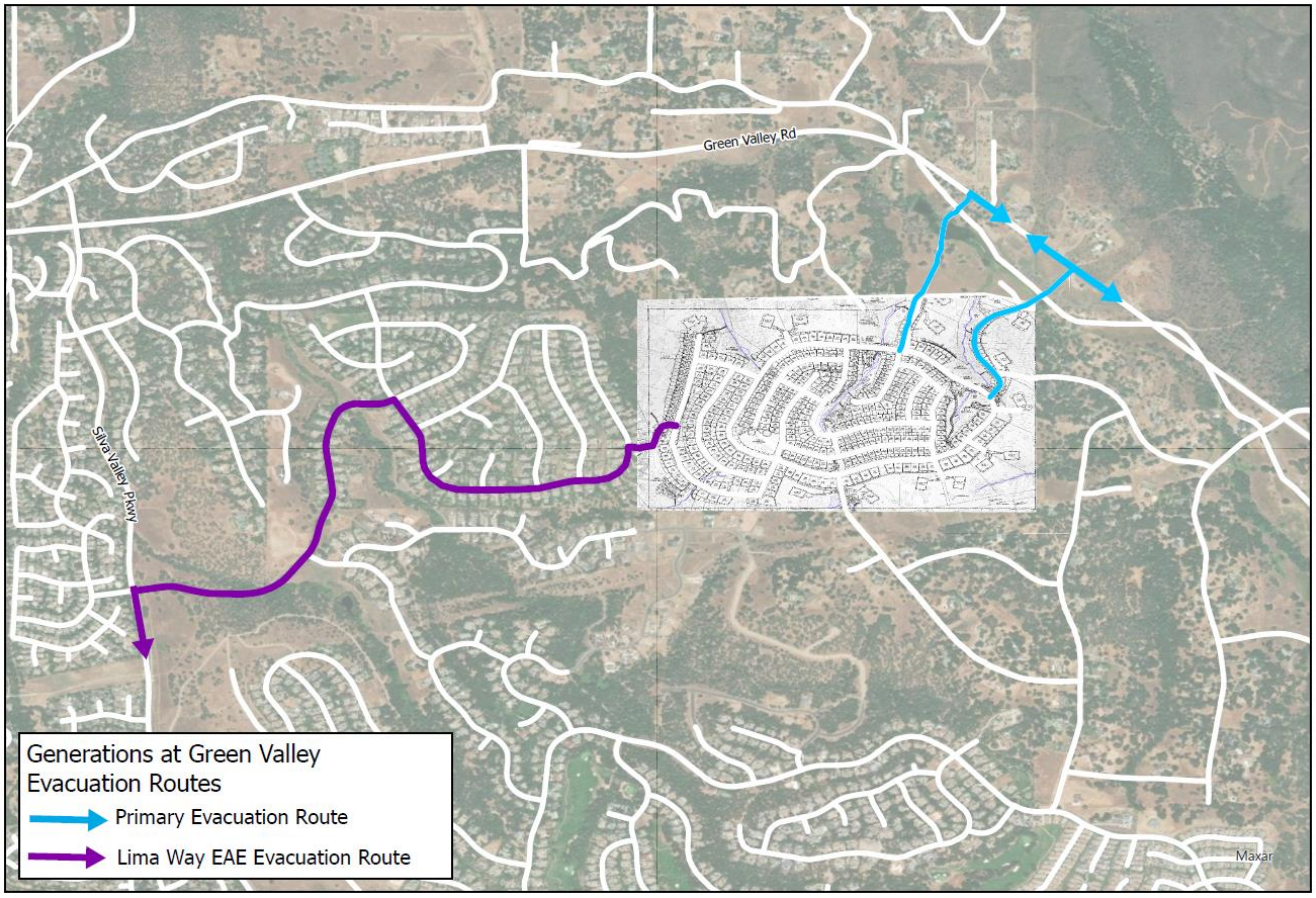


Figure 11: Area Map for Project Showing Evacuation Routes (Courtesy of DKS Associates)

The location of the Project next to a known community transportation route (Green Valley Road) will permit the Project population and the existing community population to efficiently evacuate the area while maintaining emergency vehicle access. In addition, the resident and visitor population (854 persons +/-) will not adversely impact the existing evacuation routes used during an emergency by the El Dorado Hills community due to the wildfire hazard mitigation work within the Project boundaries, available road network, and emergency alert system capabilities accessible to the Project residents.

All of the access points and adjoining public and private roads within the Project can be utilized for emergency vehicle access and civilian evacuation during an emergency as determined by the Public Safety Officials at the scene. All areas within the Project have access to two or more evacuation routes as required by the EDHCWD Fire Code. The most likely mode of transport by the residents of the Project are private vehicle ownership and private transportation services that will permit the majority of residents to move out of danger once they are directed to evacuate by Public Safety Officials.

The project will increase the number of residents to the area, but will provide emergency vehicle access and multiple exits from the project to access multiple evacuation routes. Aside from capacity increasing improvements to maintain level of service standards consistent with the County's General Plan, the Project will not adversely impact any of the existing community evacuation routes, or create a situation that establishes limited evacuation route access.

Future residents and visitors should remain vigilant to the threat of a wildfire in the area at all times. Residents should utilize the resources described in Sections 5.4 and 5.5, and be prepared to evacuate their families and animals when ordered to evacuate by a law enforcement or fire official. To increase preparedness for a potential wildfire evacuation the HOA should consider limiting on-street parking during red-flag fire weather conditions in residential areas with limited roadway capacity, and leaving all gated entrances in the open position to improve evacuation capacity.

## 5.4 Emergency Evacuation Education Measures

CAL FIRE has an effective community education program to assist residents and visitors prepare for a wildfire[34]. The program is titled *Ready-Set-Go* and is designed to assist persons in preparing for and leaving a residence threatened by a local wildfire. This information should be made available to new and existing residents and homeowners through information packets and community websites whenever practical. See Chapter 8 – Appendix J for additional information about this program.

[34] CAL FIRE, *Ready Set Go;* http://www.readyforwildfire.org/ .

## 5.5 Emergency Notification

Community notification is an important aspect of evacuation planning. Evacuations are often initiated by emergency officials who issue notifications and instructions to the affected populations using various tools such as opt-in mass alert systems, reverse-911, the Integrated Public Alert & Warning System (IPAWS), social media, and the internet. Sirens and door-to-door notifications may also be utilized. If time allows, evacuations may be conducted in phases, starting by notifying and evacuating areas of the community that may be affected first.

In El Dorado County all public safety agencies have partnered to implement the *RAVE* alert notification system.[35] The alert system is managed by the El Dorado County Sheriff's Office and allows for public safety agencies to quickly send an emergency alert to citizens in all geographic areas of the County. This system enables the El Dorado County Sheriff's Office of Emergency Services (County OES) to provide residents with critical information quickly in a variety of situations, such as severe weather, unexpected road closures, missing persons, and evacuations of buildings or neighborhoods. El Dorado RAVE provides community members with emergency notifications through telephone call, text message, and email notifications.

El Dorado County has been authorized by FEMA to use the Integrated Public Alert & Warning System (IPAWS). This is FEMA's national system for local alerts that provides authenticated emergency and life-saving information to the public through mobile phones using Wireless Emergency Alerts, to radio and television via the Emergency Alert System, and on the National Oceanic and Atmospheric Administration's Weather Radio.

END OF CHAPTER

[35] El Dorado County RAVE, Citizen Notification System; El Dorado County Emergency Alerts (edso.org)

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# CHAPTER 6: FUEL REDUCTION MANAGEMENT AND DEFENSIBLE SPACE CONCEPTS

## 6.1 Chapter Overview

The purpose of this chapter is to describe the recommended long-term comprehensive fuel reduction management and defensible space best practices for the Project. The best practices include [1] adequate defensible space within 100' of all buildings; and [2] the establishment of a Wildfire Fuel Reduction Zone (WFRZ) for all lands located within the Open Space. This Chapter is based on California Government Code Section 51182 and California Fire Code Section 4903 and includes analysis on the following subjects:

- Defensible Space Requirements
- Wildfire Fuel Reduction Zone Requirements
- Defensible Space Zone and Wildfire Fuel Reduction Zone Criteria
- Fuel Reduction on Vacant Parcels / During Construction
- Reoccurring Fuel Reduction Maintenance Frequency

## 6.2 Defensible Space Requirements

The term "Defensible Space" refers to reducing the wildfire vulnerability in WUI Zones by actions that will decrease the potential of heat, flames and embers spreading to buildings. Defensible space work around buildings should be performed within 3 zone areas based on the fire risk reduction efforts necessary to protect the occupants and property. The 3 defensible space zones around buildings are described as:

**Zone 0 – Ember Resistant Zone**

Zone 0 extends 5-feet from buildings, buildings, decks, etc.

The ember-resistant zone is currently not required by law, but scientific data has proven it to be the most important of all the defensible space zones. This zone includes the area under and around all attached decks, and requires the most stringent wildfire fuel

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reduction. The ember-resistant zone is designed to keep fire or embers from igniting materials that can spread the fire to the home. The following provides guidance for this zone, which may change based on the regulation developed by the California Board of Forestry and Fire Protection. See Figure 12 below to match the item number with the corresponding zone.

1. Use hardscape like gravel, pavers, concrete, and non-combustible mulch materials. No combustible bark or mulch.
2. Remove all dead and dying weeds, grass, plants, shrubs, trees, branches, and vegetative debris (leaves, needles, cones, bark, etc.); Check roofs, gutters, decks, porches, stairways, etc.
3. Remove all branches within 10-feet of any chimney or stovepipe outlet
4. Limit plants in this area to low growing, nonwoody, properly watered, and maintained plants.
5. Limit combustible items (outdoor furniture, planters, etc.) on top of decks
6. Relocate firewood and lumber to Zone 2
7. Replace combustible fencing, gates, and arbors attached to the home with non-combustible alternatives
8. Consider relocating garbage and recycling containers outside this zone
9. Consider relocating boats, RVs, vehicles, and other combustible items outside this zone

### Zone 1 – Lean, Clean and Green Zone

Zone 1 extends 30-feet from buildings, decks, etc. or to the property line, whichever is closer.

10. Remove all dead plants, grass, and weeds (vegetation).
11. Remove dead or dry leaves and pine needles from yard, roof, and rain gutters.
12. Remove branches that hang over roof and keep dead branches 10-feet away from your chimney.
13. Trim trees regularly to keep branches a minimum of 10- feet from other trees.
14. Relocate wood piles to Zone 2.
15. Remove or prune flammable plants and shrubs near windows.

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16. Remove vegetation and items that could catch fire from around and under decks, balconies, and stairs.
17. Create a separation between trees, shrubs and items that could catch fire, such as patio furniture, wood piles, swing sets, etc.

### Zone 2 – Reduce Fuel Zone

Zone 2 extends from 30-feet to 100-feet out from buildings, buildings, decks, etc. or to the property line, whichever is closer.

18. Cut or mow annual grass down to a maximum height of 4 inches.
19. All exposed wood piles must have a minimum of 10 feet clearance around them, down to bare mineral soil, in all directions.
20. Create horizontal space between shrubs and trees. (See diagram)
21. Create vertical space between grass, shrubs, and trees. (See diagram)
22. Remove fallen leaves, needles, twigs, bark, cones, and small branches. However, they may be permitted to a depth of 3 inches.

### All Zones

23. Mow before 10:00 am, but never when its windy or excessively dry.
24. Protect water quality, do not clear vegetation near waterways to bare soil. Vegetation removal can cause soil erosion – especially on steep slopes.
25. Logs or stumps embedded in the soil must be removed in Zone 0. In Zones 1 and 2 they need to be removed or isolated from other vegetation.

Many of these efforts shall be performed by the land owner except in cases where the setback distance of the building extends onto another property and/or undeveloped land. In those cases, a coordinated effort will be required between the individual property owners and the Home Owners Association (HOA) established for the Project. See CCR Section 5.7 regarding HOA maintenance obligations.

Figure 12 provides additional information on defensible zone spaces around buildings.

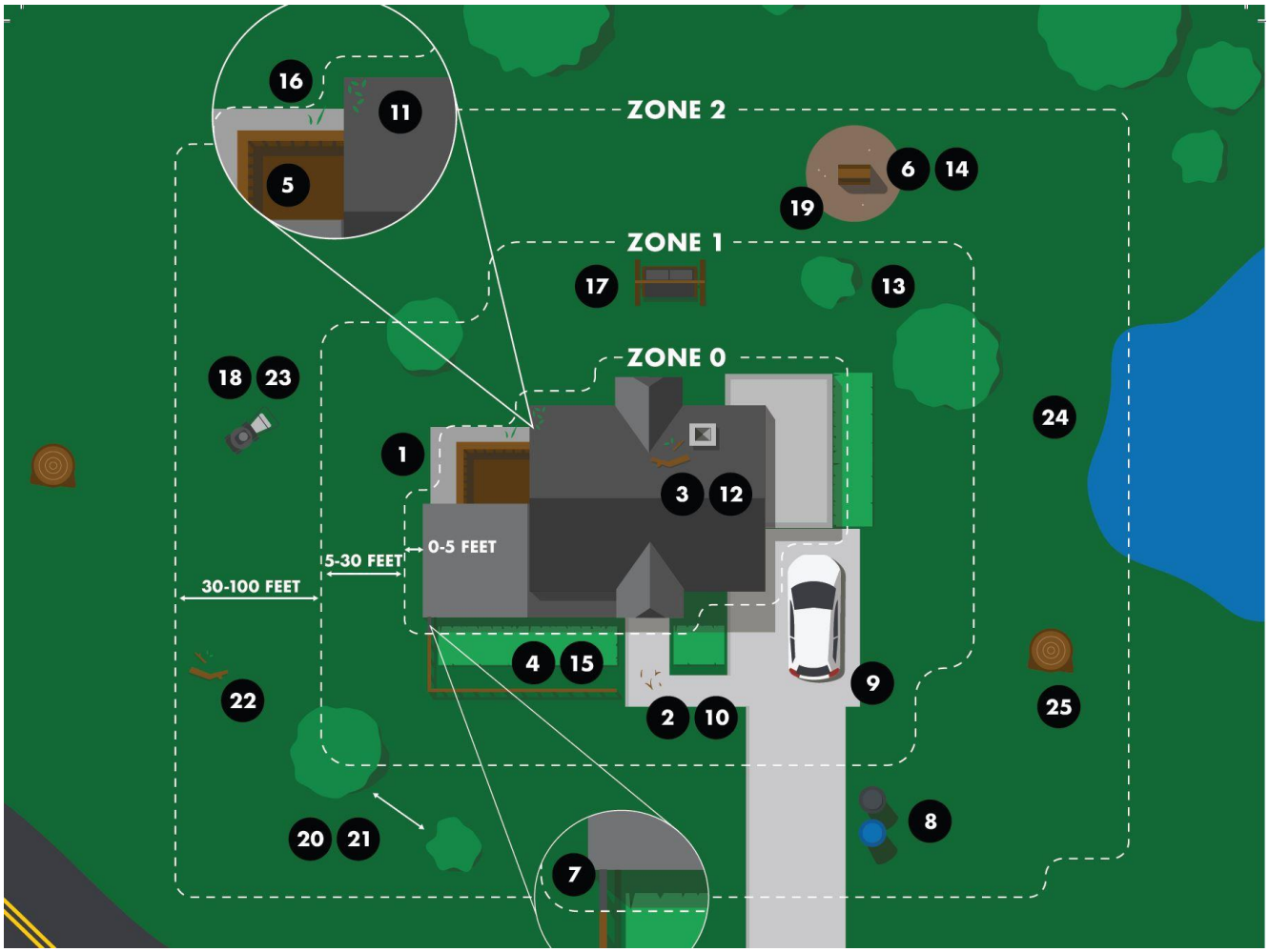


Figure 12: CAL FIRE Defensible Space Zones

## 6.3 Wildfire Fuel Reduction Zone Requirements

A Wildfire Fuel Reduction Zone (WFRZ) shall be implemented and maintained in the non-irrigated Open Space Buffer in accordance with CAL FIRE, EDHFD and El Dorado County requirements. The WFRZ shall extend from the property line of the adjacent residential lot out 100-feet, or to the boundary with a protected habitat or waterway, whichever is less, to ensure that adequate defensible space is provided for the building.

The WFRZ shall be established and accepted by EDHFD prior to the issuance of the first building construction permit issued by the County of El Dorado for the Project. Maintenance of the WFRZ shall be the responsibility of the landowner prior to the transfer of the obligation to the HOA, and shall be completed prior to May 1st each year unless otherwise ordered to complete this work earlier by EDHFD due to drought or other fire conditions being present. See the specific Wildfire

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Fuel Reduction Zone criteria for the Project described within Figure 13 and in Section 6.4 for additional details.

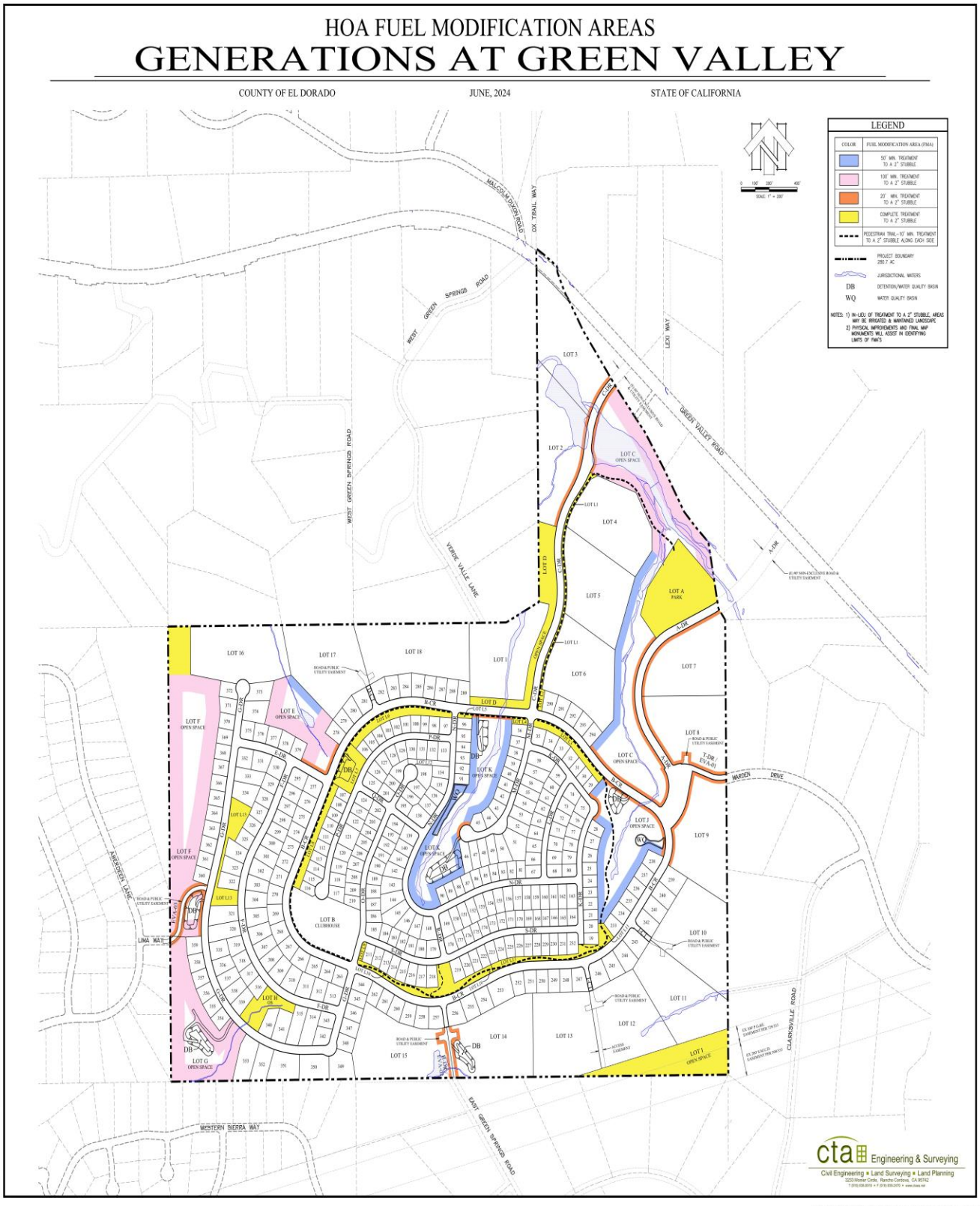


Figure 13 – Generations at Green Valley Fire Safe Exhibit

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## 6.4 Specific Wildfire Fuel Reduction Zone (WFRZ) Criteria for the Project

**A.** Annual grasses shall be maintained below 2-inches in height within 30-feet of buildings and 4-inches in height in all other areas just after the grasses cure in early spring. Additional fuel treatment work may be necessary throughout the year within 100-feet of all property lines, where practical, to maintain defensible space requirements.

**B.** Removal of dead and diseased trees, debris, and the removal of tree limbs on live trees up to a height of 6-feet above the ground. Tree branches are to be limbed to at least 6-feet when possible. The minimum height may be lowered when trees are young or small; or if it is unsafe to reach a 6-foot height due to terrain, equipment, or skill level.

**C.** Understory fuels over 1-foot in height are to be removed in order to develop vertical separation and low horizontal continuity of fuels. Individual plants or pairs of plants may be retained provided there is a horizontal separation between plants of 3 to 5 times the height of the residual plants and the residual plants are not within the drip lines of an overstory tree.

**D.** Fuel reduction shall include the removal of all dead vegetation 4-inches or less in diameter. Trunks shall be cut flush with the ground. The removal of additional trees shall be done in consultation with CAL FIRE, EDHFD and County staff.

**E.** Threatened and/or endangered species may be present within the WFRZ areas. The recommendations of the Project biologist shall be implemented with respect to avoiding loss or harm to the affected species, or restoration and/or compensation measures to be undertaken if the species' habitat cannot be avoided. For example, if nesting raptors are present, the nesting tree shall not be removed and no tree removal or mechanical activity shall occur within a buffer zone established around the nest until the young have fledged. The Federal and/or State agency with jurisdiction over the affected protected species shall also be consulted.

**F.** It is desirable to remove as much brush and large vegetation as possible within the WFRZ areas. However, if individual plants or pairs of plants are desired to be left, leave plants with the following characteristics: young plants less than 5 feet tall and individual or pairs of plants that are no more than 5-feet in width.

G. All dead trees within 100-feet of all property lines, where practical shall be removed.

H. The removal of all dead limbs and trees laying on the ground within 85-feet of all property lines shall be completed annually.

I. All trails and Class 1 Bike Paths located in open space areas shall have no less than a 10-foot wide WFRZ established along either side of the trail/path.

J. The cutting of vegetation materials shall be done with CAL FIRE approved spark arrestors.

K. The removal of annual grasses and other fine fuels shall be completed through the use of plastic string weed trimmers or other CAL FIRE approved equipment.

L. Chipping of material is permitted. Chipped material shall be removed from the site unless otherwise approved by the land owner representative and EDHFD.

M. Prescribed burning and / or herbicide use is not allowed within the DSZ and WFRZ areas unless such use is approved via permit by CAL FIRE, EDHFD and the County of El Dorado.

N. Approved fire suppression equipment is required on-site at all times during the fuel-reduction activities.

O. All fuel reduction work shall be performed using every reasonable measure to minimize erosion, ground disturbing activities and soil damage. Where the ground is exposed by fuel reduction efforts, the area shall be revegetated (i.e., seeded) and/or erosion control measures shall be installed prior to October 15.

P. Pruning of live trees shall be performed in accordance with the Best Management Practices set forth by the International Society of Arboriculture (ISA) and conform to ANSI A300 Standards for Tree Care.

## 6.5 Fuel Reduction on Vacant Parcels / During Construction

Unimproved parcels adjacent to buildings, either when vacant or under construction, can pose a significant fire risk to adjacent occupied buildings. To reduce the risk of wildfires spreading to nearby buildings, EDHFD requires all unimproved properties to comply with Ordinance 2023-01.

See Chapter 8 – Appendix H for specific requirements based on parcel size. Construction activities shall conform to the current Fire Code provision required by EDHFD and CAL FIRE.

## 6.6 Annual Fuel Reduction Maintenance Frequency

The effectiveness of the long-term comprehensive effort requires certain elements to be maintained on an annual or otherwise noted frequency. The coordination of fuel reduction work between the applicant, EDHFD and CAL FIRE staff, and the adjacent land owner(s) to complete these projects in a timely fashion is imperative for the success in minimizing the wildfire risk in the Project area. All maintenance shall be performed prior to May 1st each year unless otherwise ordered to complete this work earlier by EDHFD due to drought or other fire conditions being present.

Table 7 provides additional details regarding the recommended maintenance frequency for various activities described in the Plan.

*Table 7*: Maintenance Frequency for the DSZ and WFRZ

| Action Item | Party Responsible | Frequency |
|---|---|---|
| **Complete annual inspection of the WFRZ using the criteria found in Section 6.** | **Land Owner/EDHFD** | **Annual** |
| **Remove/trim annual grasses to less than 2-inches in height within 30-feet of buildings and 4-inches height within 100-feet of adjacent property lines.** | **Land Owner** | **Annual** |
| **Remove debris piles, dead trees (snags) or dying trees, down trees, and limbs.[36]** | **Land Owner** | **Annual** |
| **Removal of understory fuels that contribute to fire spread.** | **Land Owner** | **Annual** |
| **Removal or treatment of invasive exotic plant species that may invade the area cleared in the DSZ and WFRZ areas.** | **Land Owner** | **Annual** |
| **Remove biomass materials from the site and dispose of in accordance with best practices.** | **Land Owner** | **Annual** |
| **Remove ladder fuels (tree limbs) to 6-foot DBH and increase tree canopy spacing.** | **Land Owner** | **10 Year + As Needed** |

End of Chapter

[36] This plan recognizes that dead and dying trees may provide a beneficial use for the habitat. The removal of this vegetation should be completed after an inspection by representatives from CAL FIRE, EDHFD and the Land Owner has been completed and a scope of work agreed on by both parties.

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# CHAPTER 7: SUMMARY OF KEY FINDINGS AND PROJECT RECOMMENDATIONS

## 7.1 Key Findings for the Project

A. The Project design is consistent with the El Dorado County General Plan fire safety policies and regulations described in Chapter 3.

B. Fire and rescue services for the Project site are the responsibility of the El Dorado Hills Fire Department (EDHFD) in accordance with California Government Code § 66474.02(a)(2)(A). The Project meets or exceeds the minimum levels of service for fire district response in Community Regions in accordance with Policy 5.1.2.2 of the El Dorado County General Plan.

C. Wildfire protection for the adjacent undeveloped SRA lands near the Project are the responsibility of CAL FIRE.

D. The Generations at Green Valley Project (Project) is located within a CAL FIRE SRA designated **High** Fire Hazard Severity Zone. The Project is therefore subject to the regulations found in California Public Resource Code Section's 4290 and 4291. See Chapter 8 - Appendix B for additional information.

E. The Project is consistent with California Public Resource Code Section 4290.5 and Government Code Section 65302. All areas within the Project boundary will have access to a secondary means of egress route for residents and visitors.

F. The Project has an overall Fire Risk Rating of **Low** based upon the ten rating criteria outlined in Chapter 4.

G. The Project has one proposed use, electrical transmission lines, that is identified as a Critical Assets or Essential Service Location that could be at risk during a wildfire.

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H. No strategic ridgelines to reduce fire risk and improve fire protection, as described by California Code of Regulations Title 14 - §1276.02, have been identified by the El Dorado Hills Fire Department within the Project or adjoining areas.

I. The location of the Project next to a known community transportation route (Green Valley Road) will permit the Project population and the existing community population to efficiently evacuate the area while maintaining emergency vehicle access.

J. The Project will not expose people or structures to a significant risk of loss, injury or death involving a wildfire, and will not interfere with the existing evacuation routes used during an emergency by the El Dorado Hills community. This is due to the wildfire hazard mitigation measures described in Section 7.3, evacuation mitigation measures recommended in Section 7.4 and Appendix L, available off-site road network, and emergency alert system capabilities accessible to the Project residents.

## 7.2 Fire Protection Statutes and Regulations Applicable to the Project

A. The Project shall comply with all applicable provisions as described in California Code of Regulations Title 14 (Fire Safe Regulations) and 24 (Building Standards Code).

B. All roads and driveways within the Project shall be constructed, and maintained in accordance with EDHFD and CAL FIRE requirements. See Chapter 8 – Appendix D and G for additional details.

C. All buildings, with the exception of utility and accessory structures, shall be provided with approved address identification prior to occupancy.

D. The Project shall meet the minimum fire-flow requirements as described in Section 4.6, and as required both in California Fire Code (CFC) Section 507, and EDHCWD Ordinance 2022-01 (Fire Code). See Chapter 8 – Appendix G for additional details.

E. All residential dwellings in the Project will be provided with an approved automatic fire sprinkler system designed in accordance with the CFC. Upon occupancy these systems shall be operable and maintained by the individual land owners at all times.

F. All buildings constructed shall have a minimum 30-foot setback from property lines, or the "practical effect" provision approved by EDHFD, to reduce the threat of a wildfire impinging directly on the building. Setback areas may contain driveways, parking areas and/or other non-combustible surfaces. The minimum setback areas may be reduced based upon findings that support the practical reason for the reduction and alternative methods are implemented to reduce building-to-building ignition. When a practical reason for the reduction is necessary the Project shall implement the provisions contained within Subsections 7.3 (D) of this chapter.

G. All buildings shall be provided with a Class A roof covering as required by the El Dorado County Building Code.

H. All buildings shall be constructed and maintained in accordance with the current design standards found in *California Building Code (CBC) Chapter 7A* (**Materials and Construction Methods for Exterior Wildfire Exposure**).

I. No speed bumps, speed humps, speed control dips, etc. shall be permitted on fire access roadways. All other traffic calming devices shall be prohibited unless approved by EDHFD.

J. Gated entrances to private roads and driveways shall meet the current design requirements to allow emergency vehicle access described in Chapter 8 – Appendix F.

## 7.3 Fire Protection Plan Strategies

A. Street signs and individual building address signage shall conform with the provision described in Section 4.5. Address numbers on each residential building shall be either internally or externally illuminated.

B. Fencing materials adjacent to non-irrigated open space areas shall be constructed of non-combustible materials.

C. Combustible sheds and other outbuildings shall be kept at least 30 feet from residential dwellings and other buildings on each parcel.

D. The following specific alternative material and construction methods, exceeding the minimum criteria described in CBC Chapter 7A, shall be implemented within the Project to meet the "Practical Effect" principles described in CCR Title 14 - §1276.01 when buildings are located within 30-feet of property lines to reduce the potential for building-to-building fire spread may include, but are not limited to[37], the following provisions:

- Block any spaces between roof decking and the Class A roof covering to prevent embers from catching and igniting the building; and

- Eaves shall be enclosed on the underside with non-combustible material, ignition-resistant material, or minimum two (2) inch lumber; and

- Exterior walls shall be constructed with non-combustible building materials such as stucco, fiber cement, stone, or brick, and comply with California Code of Regulations Title 24, Part 2, Chapter 7A, Section 707A; and

- Use WUI ember and flame-resistant vents, conforming with the requirements described in ASTM E2886, to protect exterior wall openings when the wall is located within 30-feet of another building or faces the Wildland Fuel Reduction Zone areas. Dryer vents shall be metal and equipped with a louver or flap; and

- Exterior windows, skylights, glazed doors, and glazed openings within exterior doors shall be multi-paned with at least two (2) tempered panes, minimum twenty (20) minute fire rated, or fire-resistant glass block units. Shutters installed over windows shall be non-combustible; and

- Areas under first floor bay windows shall be enclosed with non-combustible walls; and

- Exterior doors of buildings shall be non-combustible, or have a non-combustible exterior storm door, and comply with California Code of Regulations Title 24, Part 2, Chapter 7A, Section 708A; and

[37] The Project will comply with all applicable state and local code and regulatory requirements to achieve "Practical Effect" at the time of issuance of the building permit.

- A minimum non-combustible area of 6 vertical inches, measured from the ground up (at grade) and from any attached horizontal surface like a deck, shall be provided on the exterior of all buildings. Non-combustible materials can include brick, stone, fiber-cement siding, or concrete; and

- Fencing materials located within 5-feet of a building shall be constructed of non-combustible materials. Areas located between 0-feet and 5-feet from all buildings shall remain non-combustible. Back-to-back, combustible fencing shall be separated by a minimum of five (5) feet; and

- Landscape materials and other vegetation located within 0'-100' of dwellings shall comply with the fire-resistant standards of EDHFD and CAL FIRE; and

- Accessory and miscellaneous structures, as defined in the California Building Code, located within the reduced fire setback zone shall comply with this plan and California Code of Regulations Title 24, Part 2, Chapter 7A, Section 710A; and

- Decks, including posts, joists, railing, stairs, and walking surfaces, shall be non-combustible and comply with California Code of Regulations Title 24, Part 2, Chapter 7A, Section 709A; and

- Projections shall be non-combustible, ignition resistant, or one (1) hour fire-rated in accordance with IWUIC, Section 503.2, and/or NFPA 1144, Section 5.2; and

- Gutters and downspouts shall be of non-combustible material. Gutters shall be provided with a non-combustible leaf guard.

See EDHFD Standard No. 7 (Residential Setback for Structure Defensible Space) for additional information.

**E.** Wildfire fuel reduction management and defensible space practices for the Project shall follow the requirements identified in Chapter 6.

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F. A Restrictive Covenant shall be filed with the final subdivision map which stipulates that a Fire Safe Plan has been prepared and wildfire mitigation measures shall be implemented.

G. "No Smoking" signs shall be posted at all trail entrances.

H. At all trail intersections with the roads that have vehicle access there shall be a knock down bollard or gate with a Knox® padlock, or other approved lock, to allow for the passage of emergency equipment onto the trail.

I. A 5-foot defensible space ember-resistant zone (Zone 0) shall be maintained around all buildings (including fencing within 5 feet).

J. A Homeowners Association (HOA), or other acceptable entity, shall be responsible for maintaining all private emergency vehicle access roads and wildfire fuel reduction zone provisions described in Chapter 6. Reliable on-going sources of funding shall be established and acceptable to EDHFD prior to the recording of the final map for the project. Specifically, and also without limiting the foregoing, the owners shall be responsible for the operation and maintenance of, and for potential liability arising from, the following measures:

- Provisions for the necessary repair and maintenance of the roadway surface (as determined by the HOA and/or EDHFD); and

- Removal of vegetation overgrowing the roadway and infringing on the roadway clear vertical height of fifteen feet (15') or width of twenty feet (20'); and

- Provisions for the maintenance, repair, and/or replacement of NO PARKING-FIRE LANE signage or striping; and

- Provisions for the necessary repair and maintenance of vehicle and pedestrian access gates and opening systems.

## 7.4 Emergency Preparedness and Evacuation Preparedness Strategies

**A.** The strategies recommended in the *Generations at Green Valley Wildfire Evacuation Study* (Appendix L) should be considered by all stakeholders.

**B.** The HOA should consider restricting on-street parking and opening all EVA gates within the Project boundaries during National Weather Service "Red-Flag" fire weather conditions in order to advance traffic flow conditions during an evacuation.

**C.** CAL FIRE *Ready-Set-Go* education materials should be made available to all new residents of the Project for their use in preparing for an evacuation. EDHFD and CAL FIRE should be encouraged to visit the neighborhood annually to discuss this material and answer questions by the homeowners. See Chapter 8 – Appendix J for additional details.

**D.** Upon 8 or more dwellings being occupied within the Project the land owners should work together to obtain designation by the National Fire Protection Association (NFPA) as a FIREWISE USA® community. This designation will assist land owners in receiving insurance discounts for their fire insurance premiums. See Chapter 8 – Appendix K for additional details.

**E.** El Dorado County OES education materials on the *RAVE* program should be made available to all new residents of the Project for use in receiving timely notification information regarding the need to evacuate.

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# Chapter 8: PLAN APPENDIXES

## Appendix A: Critical Assets / Populations at Risk Checklist

| Facility Type | Essential Service | Population at Risk | Infrabuilding at Risk | Facility Count |
|---|---|---|---|---|
| Fire Station | X | | | 0 |
| Police Station | X | | | 0 |
| Emergency Evacuation Shelter* | X | | | 0 |
| Government Facilities | X | | | 0 |
| General Acute Care Hospital | X | | | 0 |
| Medical Health Facility | | X | | 0 |
| Adult Residential Care Facility | | X | | 0 |
| Child Care Facility | | X | | 0 |
| Adult Care Facility | | X | | 0 |
| Public Elementary School | | X | | 0 |
| Private Elementary School | | X | | 0 |
| Public Middle School | | X | | 0 |
| Private Middle School | | X | | 0 |
| Public High School | | X | | 0 |
| Private High School | | X | | 0 |
| College / University | | X | | 0 |
| Vulnerable Population Centers** | | X | | 0 |
| Water Treatment Plant | | | X | 0 |
| Water Storage Facility | | | X | 0 |
| Water Conveyance System | | | X | 0 |
| Electrical Transmission Lines | | | X | 1 |
| Electrical Substation | | | X | 0 |
| Sewer Lift Station | | | X | 0 |
| Telecommunications Facilities | | | X | 0 |
| Corporation Yard | X | | | 0 |
| * Includes General Population, Access/Functional Needs Shelters, and Animal Shelters | | | | |
| ** Includes Disadvantaged, Disabled and Low-Income Census Areas | | | | |

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# Appendix B: PRC 4290 and 4291 Checklist

| **Project Name:** | | | | |
|---|---|---|---|---|
| | **CCR Title 14** | **Conforms** | **Does Not Conform** | **N/A** |
| *Safe Access and Egress* | | | | |
| Road Width | §1273.01 | X | | |
| Roadway Surface | §1273.02 | X | | |
| Road Grades | §1273.03 | X | | |
| Road Radius | §1273.04 | X | | |
| Road Turnarounds | §1273.05 | X | | |
| Road Turnouts | §1273.06 | X | | |
| Road and Driveway Buildings | §1273.07 | X | | |
| Dead-end Roads | §1273.08 | X | | |
| Gate Entrances | §1273.09 | X | | |
| *Signing and Building Numbering* | | | | |
| Road Name Signs | §1274.01 | X | | |
| Road Sign Installation | §1274.02 | X | | |
| Addresses for Buildings | §1274.03 | X | | |
| Address Installation, Location | §1274.04 | X | | |
| *Fire Water Standards* | | | | |
| Application | §1275.01 | X | | |
| Approved Fire Water Supply | §1275.02 | X | | |
| Hydrants | §1275.03 | X | | |
| Signing of Water Sources | §1275.04 | X | | |
| *Building Siting and Fuel Mod.* | | | | |
| Building and Parcel Siting/Setbacks | §1276.01 | X | | |
| Ridgelines | §1276.02 | | | X |
| Fuel Breaks | §1276.03 | | | X |
| Greenbelts, Open Spaces | §1276.04 | X | | |
| Disposal of Flammable Vegetation | §1276.05 | | | X |

## NOTES:

1. No roadway buildings (e.g., bridges, culverts, etc.) and dead-end roads are proposed within the project.
2. The review of road designs will occur during the civil improvement and building permit application process.
3. The review of proposed street signage and building numbering will occur during later phases of the project.

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# Appendix C: Emergency Evacuation Planning Checklist

| No. | Risk Factor | Yes | No | Unknown |
|---|---|---|---|---|
| | | | | |
| 1 | Existing Evacuation Plan is Current? | | | X |
| 2 | General Population Shelters Identified? | | | X |
| 3 | Special Care Shelters Identified? | | | X |
| 4 | Animal Care Shelters Identified? | | | X |
| 5 | Temporary Safe Refuge Areas Identified? | | | X |
| 6 | Emergency Evacuation Routes Identified? | X | | |
| 7 | Mass Notification System Identified/Used? | X | | |
| 8 | Ready-Set-Go or Similar Program Used? | | | X |
| 9 | Evacuation Plans Available to the Public? | | | X |
| 10 | Are First Responders Briefed on the Plan? | | | X |
| | Total | | | |

## Notes:

**1.** El Dorado County OES has not publicly created an emergency evacuation plan for use by the public and first responders as of the date of this plan.

**2-4.** El Dorado County OES has not publicly designated emergency evacuation shelters throughout the County prior to large-scale emergencies.

**5-6.** The primary emergency evacuation routes in the El Dorado Hills area have not been formally designated by El Dorado County OES as of the date of this plan. The primary transportation routes out of the area include Green Valley Road north of the Project and the East Green Springs EVA through Green Springs Ranch.

**7.** El Dorado County OES uses *RAVE* as its emergency notification system. The system relies on notifications through existing telephone lines and through "opt-in" sign-ups for cell phones and other devices. See Chapter 8 – Appendix K for additional information on this notification system.

**8-10.** EDHFD and the adjacent fire agencies utilize tactical pre-fire plans that brief first responders on various pre-fire information.

## Appendix D: California Code of Regulations Title 14 §1270-1276

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# State Minimum Fire Safe Regulations

# Board of Forestry and Fire Protection

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As of April 1, 2023

California Code of Regulations
Title 14 Natural Resources
Division 1.5 Department of Forestry
Chapter 7 - Fire Protection
Subchapter 2 State Minimum Fire Safe Regulations
Articles 1-5

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## Article 1 Administration

### § 1270.00. Title

Subchapter 2 shall be known as the “State Minimum Fire Safe Regulations,” and shall constitute the minimum Wildfire protection standards of the California Board of Forestry and Fire Protection.

### § 1270.01. Definitions

The following definitions are applicable to Subchapter 2.
(a) Agriculture: Land used for agricultural purposes as defined in a Local Jurisdiction's zoning ordinances.
(b) Board: California Board of Forestry and Fire Protection.
(c) Building: Any Structure used or intended for supporting or sheltering any use or Occupancy, except those classified as Utility and Miscellaneous Group U.
(d) CAL FIRE: California Department of Forestry and Fire Protection.
(e) Dead-end Road: A Road that has only one point of vehicular ingress/egress, including cul-de-sacs and Roads that loop back on themselves
(f) Defensible Space: The area within the perimeter of a parcel, Development, neighborhood or community where basic wildland fire protection practices and measures are implemented, providing the key point of defense from an approaching Wildfire or defense against encroaching Wildfires or escaping Structure fires. The perimeter as used in this regulation is the area encompassing the parcel or parcels proposed for construction and/or Development, excluding the physical Structure itself. The area is characterized by the establishment and maintenance of emergency vehicle access, emergency water reserves, Road names and Building identification, and fuel modification measures.
(g) Development: As defined in section 66418.1 of the California Government Code.
(h) Director: Director of the Department of Forestry and Fire Protection or their designee.
(i) Driveway: A vehicular pathway that serves no more than four (4) Residential Units and any number of non-commercial or non-industrial Utility or Miscellaneous Group U Buildings on each parcel. A Driveway shall not serve commercial or industrial uses at any size or scale.
(j) Exception: An alternative to the specified standard requested by the applicant that may be necessary due to health, safety, environmental conditions, physical site limitations or other limiting conditions, such as recorded historical sites, that provides mitigation of the problem.
(k) Fire Apparatus: A vehicle designed to be used under emergency conditions to transport personnel and equipment or to support emergency response, including but not limited to the suppression of fires.
(l) Fire Authority: A fire department, agency, division, district, or other governmental body responsible for regulating and/or enforcing minimum fire safety standards in the Local Jurisdiction.
(m) Fire Hydrant: A valved connection on a water supply or storage system for the purpose of providing water for fire protection and suppression operations.
(n) Fuel Break: A strategically located area where the volume and arrangement of vegetation has been managed to limit fire intensity, fire severity, rate of spread, crown fire potential, and/or ember production.
(o) Greenbelts: open space, parks, wildlands, other areas, or a combination thereof, as designated by Local Jurisdictions, which are in, surround, or are adjacent to a city or urbanized area, that may function as Fuel Breaks and where Building construction is restricted or prohibited.
(p) Greenways: Linear open spaces or corridors that link parks and neighborhoods within a community through natural or manmade trails and paths.


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(q) Hammerhead/T: A "T" shaped, three-point Turnaround space for Fire Apparatus on a Road or Driveway, being no narrower than the Road or Driveway that serves it.
(r) Hazardous Land Use: A land use that presents a significantly elevated potential for the ignition, prolonged duration, or increased intensity of a Wildfire due to the presence of flammable materials, liquids, or gasses, or other features that initiate or sustain combustion. Such uses are determined by the Local Jurisdiction and may include, but are not limited to, power-generation and distribution facilities; wood processing or storage sites; flammable gas or liquids processing or storage sites; or shooting ranges.
(s) Local Jurisdiction: Any county, city/county agency or department, or any locally authorized district that approves or has the authority to regulate Development.
(t) Municipal-Type Water System: A system having water pipes servicing Fire Hydrants and designed to furnish, over and above domestic consumption, a minimum of 250 gpm (950 L/min) at 20 psi (138 kPa) residual pressure for a two (2) hour duration.
(u) Occupancy: The purpose for which a Building, or part thereof, is used or intended to be used.
(v) One-way Road: A Road that provides a minimum of one Traffic Lane width designed for traffic flow in one direction only.
(w) Residential Unit: Any Building or portion thereof which contains living facilities including provisions for sleeping, eating, cooking and/or sanitation, for one or more persons. Manufactured homes, mobile homes, and factory-built housing are considered Residential Units.
(x) Ridgeline: The line of intersection of two opposing slope aspects running parallel to the long axis of the highest elevation of land; or an area of higher ground separating two adjacent streams or watersheds.
(y) Road: A public or private vehicular pathway to more than four (4) Residential Units, or to any industrial or commercial Occupancy.
(z) Road or Driveway Structures: Bridges, culverts, and other appurtenant Structures which supplement the Traffic Lane or Shoulders.
(aa) Same Practical Effect: As used in this subchapter, means an Exception or alternative with the capability of applying accepted wildland fire suppression strategies and tactics, and provisions for fire fighter safety, including:

(1) access for emergency wildland fire equipment,
(2) safe civilian evacuation,
(3) signing that avoids delays in emergency equipment response,
(4) available and accessible water to effectively attack Wildfire or defend a Structure from Wildfire, and
(5) fuel modification sufficient for civilian and fire fighter safety.

(bb) Shoulder: A vehicular pathway adjacent to the Traffic Lane.
(cc) State Responsibility Area (SRA): As defined in Public Resources Code sections 4126-4127; and the California Code of Regulations, title 14, division 1.5, chapter 7, article 1, sections 1220-1220.5.
§(ee) Structure: That which is built or constructed or any piece of work artificially built up or composed of parts joined together in some definite manner.
(ff) Traffic Lane: The portion of a Road or Driveway that provides a single line of vehicle travel.
(gg) Turnaround: An area which allows for a safe opposite change of direction for Fire Apparatus at the end of a Road or Driveway.
(hh) Turnout: A widening in a Road or Driveway to allow vehicles to pass.

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(ii) Undeveloped Ridgeline: A Ridgeline with no Buildings.
(jj) Utility and Miscellaneous Group U: A Structure of an accessory character or a miscellaneous Structure not classified in any specific Occupancy permitted, constructed, equipped, and maintained to conform to the requirements of Title 24, California Building Standards Code.
(kk) Vertical Clearance: The minimum specified height of a bridge, overhead projection, or vegetation clearance above the Road or Driveway.
(*ll*) Vertical Curve: A curve at a high or low point of a Road that provides a gradual transition between two Road grades or slopes.
(mm) Very High Fire Hazard Severity Zone (VHFHSZ): As defined in Government Code section 51177(i).
(nn) Wildfire: Has the same meaning as "forest fire" in Public Resources Code Section 4103.

## § 1270.02. Purpose

(a) Subchapter 2 has been prepared and adopted for the purpose of establishing state minimum Wildfire protection standards in conjunction with Building, construction, and Development in the State Responsibility Area (SRA) and, after July 1, 2021, the Very High Fire Hazard Severity Zones, as defined in Government Code § 51177(i) (VHFHSZ).
(b) The future design and construction of Structures, subdivisions and Developments in the SRA and, after July 1, 2021, the VHFHSZ shall provide for basic emergency access and perimeter Wildfire protection measures as specified in the following articles.
(c) These standards shall provide for emergency access; signing and Building numbering; private water supply reserves for emergency fire use; vegetation modification, Fuel Breaks, Greenbelts, and measures to preserve Undeveloped Ridgelines. Subchapter 2 specifies the minimums for such measures.

## § 1270.03. Scope

(a) Subchapter 2 shall apply to:
(1) the perimeters and access to all residential, commercial, and industrial Building construction within the SRA approved after January 1, 1991, and those approved after July 1, 2021 within the VHFHSZ, except as set forth below in subsection (b).
(2) the siting of newly installed commercial modulars, manufactured homes, mobilehomes, and factory-built housing, as defined in Health and Safety Code sections 18001.8, 18007, 18008, and 19971;
(3) all tentative and parcel maps or other Developments approved after January 1, 1991; and
(4) applications for Building permits on a parcel approved in a pre-1991 parcel or tentative map to the extent that conditions relating to the perimeters and access to the Buildings were not imposed as part of the approval of the parcel or tentative map.
(b) Subchapter 2 does not apply where an application for a Building permit is filed after January 1, 1991 for Building construction on a parcel that was formed from a parcel map or tentative map (if the final map for the tentative map is approved within the time prescribed by the local ordinance) approved prior to January 1, 1991, to the extent that conditions relating to the perimeters and access to the Buildings were imposed by the parcel map or final tentative map approved prior to January 1, 1991.
(c) Affected activities include, but are not limited to:
(1) permitting or approval of new parcels, excluding lot line adjustments as specified in Government Code (GC) section 66412(d);
(2) application for a Building permit for new construction not relating to an existing Structure;

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(3) application for a use permit;
(4) Road construction including construction of a Road that does not currently exist, or extension of an existing Road.

(d) The standards in Subchapter 2 applicable to Roads shall not apply to Roads used solely for Agriculture; mining; or the management of timberland or harvesting of forest products.

## § 1270.04. Provisions for Application of these Regulations

This Subchapter shall be applied as follows:
(a) the Local Jurisdictions shall provide the Director of the California Department of Forestry and Fire Protection (CAL FIRE) or their designee with notice of applications for Building permits, tentative parcel maps, tentative maps, and installation or use permits for construction or Development within the SRA, or if after July, 1 2021, the VHFHSZ.
(b) the Director or their designee may review and make fire protection recommendations on applicable construction or development permits or maps provided by the Local Jurisdiction.
(c) the Local Jurisdiction shall ensure that the applicable sections of this Subchapter become a condition of approval of any applicable construction or Development permit or map.

## § 1270.05. Local Regulations

(a) Subchapter 2 shall serve as the minimum Wildfire protection standards applied in SRA and VHFHSZ. However, Subchapter 2 does not supersede local regulations which equal or exceed the standards of this Subchapter.
(b) A local regulation equals or exceeds a minimum standard of this Subchapter only if, at a minimum, the local regulation also fully complies with the corresponding minimum standard in this Subchapter.
(c) A Local Jurisdiction shall not apply exemptions to Subchapter 2 that are not enumerated in Subchapter 2. Exceptions requested and approved in conformance with § 1270.07 (Exceptions to Standards) may be granted on a case-by-case basis.
(d) Notwithstanding a local regulation that equals or exceeds the State Minimum Fire Safe Regulations, Building construction shall comply with the State Minimum Fire Safe Regulations.

## § 1270.06. Inspections

Inspections shall conform to the following requirements:
(a) Inspections in the SRA shall be made by:
(1) the Director, or
(2) Local Jurisdictions that have assumed state fire protection responsibility on SRA lands, or
(3) Local Jurisdictions where the inspection duties have been formally delegated by the Director to the Local Jurisdictions, pursuant to subsection (b).

(b) The Director may delegate inspection authority to a Local Jurisdiction subject to all of the following criteria:
(1) The Local Jurisdiction represents that they have appropriate resources to perform the delegated inspection authority.
(2) The Local Jurisdiction acknowledges that CAL FIRE's authority under subsection (d) shall not be waived or restricted.
(3) The Local Jurisdiction consents to the delegation of inspection authority.
(4) The Director may revoke the delegation at any time.
(5) The delegation of inspection authority, and any subsequent revocation of the delegation, shall be documented in writing, and retained on file at the CAL FIRE Unit headquarters that administers SRA fire protection in the area.

(c) Inspections in the VHFHSZ shall be made by the Local Jurisdiction.


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(d) Nothing in this section abrogates CAL FIRE's authority to inspect and enforce state forest and fire laws in the SRA even when the inspection duties have been delegated pursuant to this section.
(e) Reports of violations within the SRA shall be provided to the CAL FIRE Unit headquarters that administers SRA fire protection in the Local Jurisdiction.
(f) When inspections are conducted, they shall occur prior to: the issuance of the use permit or certificate of Occupancy; the recordation of the parcel map or final map; the filing of a notice of completion; or the final inspection of any project or Building permit.

## § 1270.07. Exceptions to Standards

(a) Upon request by the applicant, an Exception to standards within this Subchapter may be allowed by the Inspection entity in accordance with 14 CCR § 1270.06 (Inspections) where the Exceptions provide the Same Practical Effect as these regulations towards providing Defensible Space. Exceptions granted by the Local Jurisdiction listed in 14 CCR § 1270.06, shall be made on a case-by-case basis only. Exceptions granted by the Local Jurisdiction listed in 14 CCR § 1270.06 shall be forwarded to the appropriate CAL FIRE unit headquarters that administers SRA fire protection in that Local Jurisdiction, or the county in which the Local Jurisdiction is located and shall be retained on file at the Unit Office.
(b) Requests for an Exception shall be made in writing to the Local Jurisdiction listed in 14 CCR § 1270.06 by the applicant or the applicant's authorized representative.
At a minimum, the request shall state the specific section(s) for which an Exception is requested; material facts supporting the contention of the applicant; the details of the Exception proposed; and a map showing the proposed location and siting of the Exception. Local Jurisdictions listed in § 1270.06 (Inspections) may establish additional procedures or requirements for Exception requests.
(c) Where an Exception is not granted by the inspection entity, the applicant may appeal such denial to the Local Jurisdiction. The Local Jurisdiction may establish or utilize an appeal process consistent with existing local building or planning department appeal processes.
(d) Before the Local Jurisdiction makes a determination on an appeal, the inspector shall be consulted and shall provide to that Local Jurisdiction documentation outlining the effects of the requested Exception on Wildfire protection.
(e) If an appeal is granted, the Local Jurisdiction shall make findings that the decision meets the intent of providing Defensible Space consistent with these regulations. Such findings shall include a statement of reasons for the decision. A written copy of these findings shall be provided to the CAL FIRE Unit headquarters that administers SRA fire protection in that Local Jurisdiction.

## § 1270.08. Distance Measurements

All specified or referenced distances are measured along the ground, unless otherwise stated.



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## Article 2 Ingress and Egress

### § 1273.00. Intent

Roads, and Driveways, whether public or private, unless exempted under 14 CCR § 1270.03(d), shall provide for safe access for emergency Wildfire equipment and civilian evacuation concurrently, and shall provide unobstructed traffic circulation during a Wildfire emergency consistent with 14 CCR §§ 1273.00 through 1273.09.

### § 1273.01. Width.

(a) All roads shall be constructed to provide a minimum of two ten (10) foot traffic lanes, not including shoulder and striping. These traffic lanes shall provide for two-way traffic flow to support emergency vehicle and civilian egress, unless other standards are provided in this article or additional requirements are mandated by Local Jurisdictions or local subdivision requirements. Vertical clearances shall conform to the requirements in California Vehicle Code section 35250.

(b) All One-way Roads shall be constructed to provide a minimum of one twelve (12) foot traffic lane, not including Shoulders. The Local Jurisdiction may approve One-way Roads.

(1) All one-way roads shall, at both ends, connect to a road with two traffic lanes providing for travel in different directions, and shall provide access to an area currently zoned for no more than ten (10) Residential Units.

(2) In no case shall a One-way Road exceed 2,640 feet in length. A turnout shall be placed and constructed at approximately the midpoint of each One-way Road.

(c) All driveways shall be constructed to provide a minimum of one (1) ten (10) foot traffic lane, fourteen (14) feet unobstructed horizontal clearance, and unobstructed vertical clearance of thirteen feet, six inches (13′ 6″).

### § 1273.02. Road Surface

(a) Roads shall be designed and maintained to support the imposed load of Fire Apparatus weighing at least 75,000 pounds, and provide an aggregate base.

(b) Road and Driveway Structures shall be designed and maintained to support at least 40,000 pounds.

(c) Project proponent shall provide engineering specifications to support design, if requested by the Local Jurisdiction.

### § 1273.03. Grades

(a) At no point shall the grade for all Roads and Driveways exceed 16 percent.

(b) The grade may exceed 16%, not to exceed 20%, with approval from the Local Jurisdiction and with mitigations to provide for Same Practical Effect.

### § 1273.04. Radius

(a) No Road or Road Structure shall have a horizontal inside radius of curvature of less than fifty (50) feet. An additional surface width of four (4) feet shall be added to curves of 50-100 feet radius; two (2) feet to those from 100-200 feet.

(b) The length of vertical curves in Roadways, exclusive of gutters, ditches, and drainage structures designed to hold or divert water, shall be not less than one hundred (100) feet.

### § 1273.05. Turnarounds

(a) Turnarounds are required on Driveways and Dead-end Roads.



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(b) The minimum turning radius for a turnaround shall be forty (40) feet, not including parking, in accordance with the figures in 14 CCR §§ 1273.05(e) and 1273.05(f). If a hammerhead/T is used instead, the top of the "T" shall be a minimum of sixty (60) feet in length.
(c) Driveways exceeding 150 feet in length, but less than 800 feet in length, shall provide a turnout near the midpoint of the Driveway. Where the driveway exceeds 800 feet, turnouts shall be provided no more than 400 feet apart.
(d) A turnaround shall be provided on Driveways over 300 feet in length and shall be within fifty (50) feet of the building.
(d) Each Dead-end Road shall have a turnaround constructed at its terminus. Where parcels are zoned five (5) acres or larger, turnarounds shall be provided at a maximum of 1,320 foot intervals.
(e) Figure A. Turnarounds on roads with two ten-foot traffic lanes.
Figure A/Image 1 on the left is a visual representation of paragraph (b).
(f) Figure B. Turnarounds on driveways with one ten-foot traffic lane.
Figure B/Image 2 on the right is a visual representation of paragraph (b).

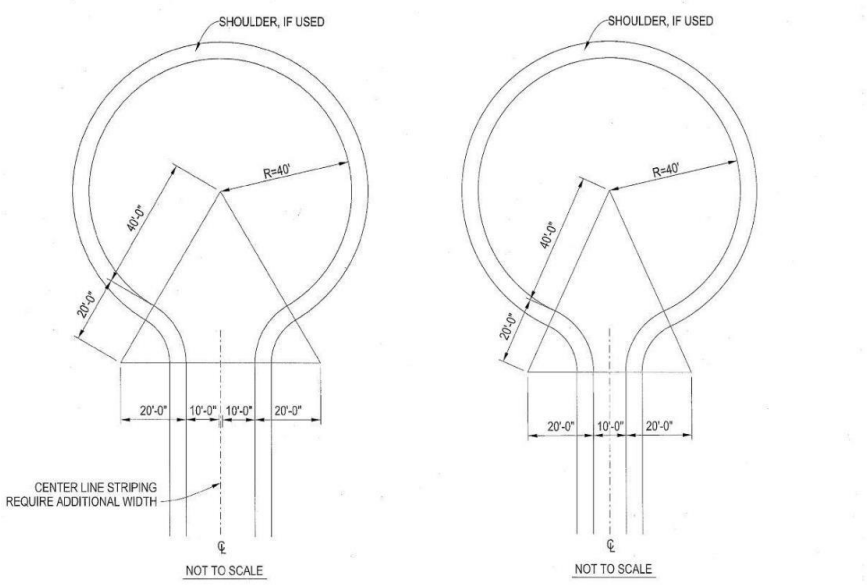


FIGURE FOR 14 CCR § 1273.05. TURNAROUND EXAMPLES

## § 1273.06. Turnouts

Turnouts shall be a minimum of twelve (12) feet wide and thirty (30) feet long with a minimum twenty-five (25) foot taper on each end.

## § 1273.07. Road and Driveway Structures

(a) Appropriate signing, including but not limited to weight or vertical clearance limitations, One-way Road or single traffic lane conditions, shall reflect the capability of each bridge.
(b) Where a bridge or an elevated surface is part of a Fire Apparatus access road, the bridge shall be constructed and maintained in accordance with the American Association of State and


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Highway Transportation Officials Standard Specifications for Highway Bridges, 17th Edition, published 2002 (known as AASHTO HB-17), hereby incorporated by reference. Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus. Vehicle load limits shall be posted at both entrances to bridges when required by the local authority having jurisdiction.
(c) Where elevated surfaces designed for emergency vehicle use are adjacent to surfaces which are not designed for such use, barriers, or signs, or both, as approved by the local authority having jurisdiction, shall be installed and maintained.
(d) A bridge with only one traffic lane may be authorized by the Local Jurisdiction; however, it shall provide for unobstructed visibility from one end to the other and turnouts at both ends.

## § 1273.08. Dead-end Roads

(a) The maximum length of a Dead-end Road, including all Dead-end Roads accessed from that Dead-end Road, shall not exceed the following cumulative lengths, regardless of the number of parcels served:

parcels zoned for less than one acre - 800 feet
parcels zoned for 1 acre to 4.99 acres - 1,320 feet
parcels zoned for 5 acres to 19.99 acres - 2,640 feet
parcels zoned for 20 acres or larger - 5,280 feet

All lengths shall be measured from the edge of the Road surface at the intersection that begins the Road to the end of the Road surface at its farthest point. Where a dead-end road crosses areas of differing zoned parcel sizes requiring different length limits, the shortest allowable length shall apply.
(b) See 14 CCR § 1273.05 for dead-end road turnaround requirements.

## § 1273.09. Gate Entrances

(a) Gate entrances shall be at least two (2) feet wider than the width of the traffic lane(s) serving that gate and a minimum width of fourteen (14) feet unobstructed horizontal clearance and unobstructed vertical clearance of thirteen feet, six inches (13′ 6″).
(b) All gates providing access from a Road to a Driveway shall be located at least thirty (30) feet from the roadway and shall open to allow a vehicle to stop without obstructing traffic on that Road.
(c) Where a One-way Road with a single traffic lane provides access to a gated entrance, a forty (40) foot turning radius shall be used.
(d) Security gates shall not be installed without approval. Where security gates are installed, they shall have an approved means of emergency operation. Approval shall be by the local authority having jurisdiction. The security gates and the emergency operation shall be maintained operational at all times.


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## Article 3 Signing and Building Numbering

### § 1274.00. Intent

To facilitate locating a fire and to avoid delays in response, all newly constructed or approved Roads and Buildings shall be designated by names or numbers posted on signs clearly visible and legible from the Road. This section shall not restrict the size of letters or numbers appearing on road signs for other purposes.

### § 1274.01. Road Signs.

(a) Newly constructed or approved Roads must be identified by a name or number through a consistent system that provides for sequenced or patterned numbering and/or non-duplicative naming within each Local Jurisdiction. This section does not require any entity to rename or renumber existing roads, nor shall a Road providing access only to a single commercial or industrial Occupancy require naming or numbering.
(b) The size of letters, numbers, and symbols for Road signs shall be a minimum four (4) inch letter height, half inch (.5) inch stroke, reflectorized, contrasting with the background color of the sign.

### § 1274.02. Road Sign Installation, Location, and Visibility.

(a) Road signs shall be visible and legible from both directions of vehicle travel for a distance of at least one hundred (100) feet.
(b) Signs required by this article identifying intersecting Roads shall be placed at the intersection of those Roads.
(c) A sign identifying traffic access or flow limitations, including but not limited to weight or vertical clearance limitations, dead-end roads, one-way roads, or single lane conditions, shall be placed:

(1) at the intersection preceding the traffic access limitation, and
(2) no more than one hundred (100) feet before such traffic access limitation.

(d) Road signs required by this article shall be posted at the beginning of construction and shall be maintained thereafter.

### § 1274.03. Addresses for Buildings.

(a) All Buildings shall be issued an address by the Local Jurisdiction which conforms to that jurisdiction's overall address system. Utility and miscellaneous Group U Buildings are not required to have a separate address; however, each Residential Unit within a Building shall be separately identified.
(b) The size of letters, numbers, and symbols for addresses shall conform to the standards in the California Fire Code, California Code of Regulations title 24, part 9.
(c) Addresses for residential Buildings shall be reflectorized.

### § 1274.04. Address Installation, Location, and Visibility.

(a) All buildings shall have a permanently posted address which shall be plainly legible and visible from the Road fronting the property.
(b) Where access is by means of a private Road and the address identification cannot be viewed from the public way, an unobstructed sign or other means shall be used so that the address is visible from the public way.
(c) Address signs along one-way Roads shall be visible from both directions.
(d) Where multiple addresses are required at a single driveway, they shall be mounted on a single sign or post.



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(e) Where a Road provides access solely to a single commercial or industrial business, the address sign shall be placed at the nearest Road intersection providing access to that site, or otherwise posted to provide for unobstructed visibility from that intersection.
(f) In all cases, the address shall be posted at the beginning of construction and shall be maintained thereafter.

## Article 4 Emergency Water Standards

### § 1275.00. Intent

Emergency water for Wildfire protection shall be available, accessible, and maintained in quantities and locations specified in the statute and these regulations in order to attack a Wildfire or defend property from a Wildfire.

### § 1275.01. Application

The provisions of this article shall apply in the tentative and parcel map process when new parcels are approved by the Local Jurisdiction.

### § 1275.02. Water Supply.

(a) When a water supply for structure defense is required to be installed, such protection shall be installed and made serviceable prior to and during the time of construction except when alternative methods of protection are provided and approved by the Local Jurisdiction.
(b) Water systems equaling or exceeding the California Fire Code, California Code of Regulations title 24, part 9, or, where a municipal-type water supply is unavailable, National Fire Protection Association (NFPA) 1142, “Standard on Water Supplies for Suburban and Rural Fire Fighting,” 2017 Edition, hereby incorporated by reference, shall be accepted as meeting the requirements of this article.
(c) Such emergency water may be provided in a fire agency mobile water tender, or naturally occurring or man made containment structure, as long as the specified quantity is immediately available.
(d) Nothing in this article prohibits the combined storage of emergency Wildfire and structural firefighting water supplies unless so prohibited by local ordinance or specified by the local fire agency.
(e) Where freeze or crash protection is required by Local Jurisdictions, such protection measures shall be provided.

### § 1275.03. Hydrants and Fire Valves.

(a) The hydrant or fire valve shall be eighteen (18) inches above the finished surface. Its location in relation to the road or driveway and to the building(s) or structure(s) it serves shall comply with California Fire Code, California Code of Regulations title 24, part 9, Chapter 5, and Appendix C.
(b) The hydrant head shall be a two and half (2 1/2) inch National Hose male thread with cap for pressure and gravity flow systems and four and a half (4 1/2) inch for draft systems.
(c) Hydrants shall be wet or dry barrel and have suitable freeze or crash protection as required by the local jurisdiction.
§ 1275.04. Signing of Water Sources.
(a) Each hydrant, fire valve, or access to water shall be identified as follows:
(1) if located along a driveway, a reflectorized blue marker, with a minimum dimension of three (3) inches shall be located on the driveway address sign and mounted on a fire retardant post, or
(2) if located along a road,

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(i) a reflectorized blue marker, with a minimum dimension of three (3) inches, shall be mounted on a fire retardant post. The sign post shall be within three (3) feet of said hydrant or fire valve, with the sign no less than three (3) feet nor greater than five (5) feet above ground, in a horizontal position and visible from the driveway, or
(ii) as specified in the State Fire Marshal's Guidelines for Fire Hydrant Markings Along State Highways and Freeways, May 1988.

### § 1275.04. Signing of Water Sources.

(a) Each Fire Hydrant or access to water shall be identified as follows:
(1) if located along a Driveway, a reflectorized blue marker, with a minimum dimension of three (3) inches shall be located on the Driveway address sign and mounted on a fire retardant post, or
(2) if located along a Road,
(i) a reflectorized blue marker, with a minimum dimension of three (3) inches, shall be mounted on a fire retardant post. The sign post shall be within three (3) feet of said Fire Hydrant with the sign no less than three (3) feet nor greater than five (5) feet above ground, in a horizontal position and visible from the Driveway, or
(ii) as specified in the State Fire Marshal's Guidelines for Fire Hydrant Markings Along State Highways and Freeways, May 1988.

## Article 5 Building Siting, Setbacks, and Fuel Modification

### § 1276.00 Intent

To reduce the intensity of a Wildfire, reducing the volume and density of flammable vegetation around Development through strategic fuel modification, parcel siting and Building setbacks, and the protection of Undeveloped Ridgelines shall provide for increased safety for emergency fire equipment, including evacuating civilians, and a point of attack or defense from a Wildfire.

### § 1276.01. Building and Parcel Siting and Setbacks

(a) All parcels shall provide a minimum thirty (30) foot setback for all Buildings from all property lines and/or the center of a Road, except as provided for in subsection (b).
(b) A reduction in the minimum setback shall be based upon practical reasons, which may include but are not limited to, parcel dimensions or size, topographic limitations, Development density requirements or other Development patterns that promote low-carbon emission outcomes; sensitive habitat; or other site constraints, and shall provide for an alternative method to reduce Structure-to-Structure ignition by incorporating features such as, but not limited to:
(1) non-combustible block walls or fences; or
(2) non-combustible material extending five (5) feet horizontally from the furthest extent of the Building; or
(3) hardscape landscaping; or
(4) a reduction of exposed windows on the side of the Structure with a less than thirty (30) foot setback; or
(5) the most protective requirements in the California Building Code, California Code of Regulations Title 24, Part 2, Chapter 7A, as required by the Local Jurisdiction.


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## § 1276.02. Ridgelines

(a) The Local Jurisdiction shall identify Strategic Ridgelines, if any, to reduce fire risk and improve fire protection through an assessment of the following factors:

(1) Topography;

(2) Vegetation;

(3) Proximity to any existing or proposed residential, commercial, or industrial land uses;

(4) Construction where mass grading may significantly alter the topography resulting in the elimination of Ridgeline fire risks;

(5) Ability to support effective fire suppression; and

(6) Other factors, if any, deemed relevant by the Local Jurisdiction.

(b) Preservation of Undeveloped Ridgelines identified as strategically important shall be required pursuant to this section.

(c) New Buildings on Undeveloped Ridgelines identified as strategically important are prohibited, as described in subsections (c)(1), (c)(2), and (c)(3).

(1) New Residential Units are prohibited within or at the top of drainages or other topographic features common to Ridgelines that act as chimneys to funnel convective heat from Wildfires.

(2) Nothing in this subsection shall be construed to alter the extent to which utility infrastructure, including but not limited to wireless telecommunications facilities, as defined in Government Code section 65850.6, subdivision (d)(2), or Storage Group S or Utility and Miscellaneous Group U Structures, may be constructed on Undeveloped Ridgelines.

(3) Local Jurisdictions may approve Buildings on Strategic Ridgelines where Development activities such as mass grading will significantly alter the topography that results in the elimination of Ridgeline fire risks.

(d) The Local Jurisdiction may implement further specific requirements to preserve Undeveloped Ridgelines.

## § 1276.03. Fuel Breaks

(a) When Building construction meets the following criteria, the Local Jurisdiction shall determine the need and location for Fuel Breaks in consultation with the Fire Authority:

(1) the permitting or approval of three (3) or more new parcels, excluding lot line adjustments as specified in Government Code (GC) section 66412(d); or

(2) an application for a change of zoning increasing zoning intensity or density; or

(3) an application for a change in use permit increasing use intensity or density.

(b) Fuel Breaks required by the Local Jurisdiction, in consultation with the Fire Authority, shall be located, designed, and maintained in a condition that reduces the potential of damaging radiant and convective heat or ember exposure to Access routes, Buildings, or infrastructure within the Development.

(c) Fuel Breaks shall have, at a minimum, one point of entry for fire fighters and any Fire Apparatus. The specific number of entry points and entry requirements shall be determined by the Local Jurisdiction, in consultation with the Fire Authority.

(d) Fuel Breaks may be required at locations such as, but not limited to:

(1) Directly adjacent to defensible space as defined by 14 CCR § 1299.02 to reduce radiant and convective heat exposure, ember impacts, or support fire suppression tactics;

(2) Directly adjacent to Roads to manage radiant and convective heat exposure or ember impacts, increase evacuation safety, or support fire suppression tactics;

(3) Directly adjacent to a Hazardous Land Use to limit the spread of fire from such uses, reduce radiant and convective heat exposure, or support fire suppression tactics;



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# Appendix E: El Dorado Co. Code Section 110.16 Uniform Building Code

**Specific Provisions Applicable to the Project that are found in the El Dorado County Code.**

**Fire Protection System Shop Drawings**

### Sec. 110.16.030. - International Building Code, Appendix Chapter 1 Section 106.1.1.1—Fire protection system shop drawings.

Appendix Chapter 1 Section 106.1.1.1 of the International Building Code shall have added:

Plans for buildings more than two stories in height of other than Group R, Division 3 and Group U Occupancies shall indicate how required structural and fire-resistive integrity will be maintained where a penetration will be made for electrical, mechanical, plumbing, and communication conduits, pipes, and similar systems.

The installer shall submit plans showing the proposed installation, indicating the location of the equipment and such accessories as may be required to ensure the proper and safe performance of its function.

(Code 1997, § 15.16.030; Ord. No. 4948, 10-19-2010)

**Class A Roof Cover Requirements**

### Sec. 110.16.110. - International Building Code As Amended, Chapter 15, Section 1505, Fire classification.

Section 1505 of the International Building Code is amended to read:

1505.1.2 Roof coverings within the unincorporated area of El Dorado County:

The entire roof covering of every existing structure where more than 50 percent of the total roof area is replaced within any one-year period, the entire roof covering of every new structure and any roof covering applied in the alteration, repair or replacement of the roof of every existing structure shall be a fire-retardant roof covering that is at least Class A for all residential occupancies and Class B for all commercial, industrial and public assembly buildings.

Where, in any specific case, different sections of applicable codes specify different materials, methods of construction, or other requirements, the most restrictive provisions shall govern.

(Code 1997, § 15.16.110; Ord. No. 4948, 10-19-2010)

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# Appendix F: El Dorado County Fire Chiefs Association Standards

The El Dorado County Fire Chiefs Association has developed a series of fire protection standards that are designed to assist landowners, developers and builders understand and interpret the fire protection design criteria locally. All of the current fire protection standards can be accessed at the following location:

Fire Prevention Officers - El Dorado County Fire Chiefs Association (edchiefs.org).

The following fire protection standards may apply to this tentative parcel map project:

**Standard B-001; Addressing of Buildings**
**Standard B-002; Automatic & Manual Gates on Fire Access Roadways and Driveways**
**Standard B-003; Emergency Apparatus Access Ways**
**Standard D-003; Water Supplies for Suburban and Rural Firefighting**
**Standard G-001; Fire Department Access & Clearances During Construction**
**Standard H-005; Solar Photovoltaic Standard**
**Standard R-001; Construction of Residential Buildings (EDHFD Specific)**
**Standard 7; Residential Setback for Structure Defensible Space (EDHFD Specific)**

# Appendix G: EDHCWD Ordinance 2022-01 (Fire Code)

**EL DORADO HILLS COUNTY WATER DISTRICT**

**EL DORADO HILLS FIRE DEPARTMENT**

**ORDINANCE NO. 2022-01**

BE IT ORDAINED BY THE BOARD OF DIRECTORS OF THE EL DORADO HILLS COUNTY WATER DISTRICT AS FOLLOWS:

An ordinance of the El Dorado Hills County Water District (EDHCWD) adopting the 2022 Edition of the *California Fire Code*, incorporating the 2021 Edition of the *International Fire Code*, regulating and governing the safeguarding of life and property from fire and explosion hazards arising from the storage, handling and use of hazardous substances, materials and devices, and from conditions hazardous to life or property in the occupancy of buildings and premises in the EDHCWD; providing for the issuance of permits and collection of fees therefor; Repealing Ordinance No. 2019-01 of the EDHCWD and all other ordinances and parts of the ordinances in conflict therewith.

Be it ORDAINED by the Board of Directors of the EDHCWD, also known as the El Dorado Hills Fire Department:

Section 1: **FINDINGS OF FACTS**
Section 2: **ADOPTION OF CODE WITH EXCLUSIONS**
Section 3: **LOCAL AMENDMENTS**
Section 4: **CONFLICT**
Section5: **SEVERABILITY**
Section 6: **EFFECTIVE DATE AND PUBLICATION**

**SECTION 1: FINDINGS OF FACTS**

The EDHCWD makes certain changes (listed below) to the *California Fire Code*, 2022 Edition, pursuant to *Health & Safety Code Sections 13869.7, 17958.5, 17958.7* and *18941.5* during this code adoption process. Such changes are necessary because of local climatic, geological and/or topographical conditions. The EDHCWD has adopted, pursuant to *Section 18941.5* of the *California Health & Safety Code*, the findings of facts relative to these conditions by Resolution #2019-10 of the EDHCWD dated September 19, 2019.

**SECTION 2: ADOPTION OF CODE WITH EXCLUSIONS**

The EDHCWD adopts the 2022 *California Fire Code*, *Title 24*, *Part 9*, **in its entirety**, including Appendices, incorporating those sections of the *International Fire Code*, 2021 edition not adopted by the state, with the exclusions listed below:

Exclusions: 103, 309, 311.5, 311.6, 318, 403.3, 403.5, 403.8, 403.10, 403.11, 404, 406, 903.3.1.2, 904.1.1, 1103.1, 1103.3-1103.4, 1103.6, 1105, Chapter 26, D104.2 (Exception only), D106.1 (Exception only), D107.1 (Exceptions only), Appendix A, Appendix G, Appendix J, Appendix K, Appendix L, Appendix M, Appendix N, Appendix O.

Appendices not adopted can be used for reference in enforcing other sections of the 2022 *California Fire Code*.

**SECTION 3: AMENDMENTS TO THE 2022 CALIFORNIA FIRE CODE**

The following Sections are hereby amended or added:

**Chapter 1**

SECTION 101.1 "TITLE" SHALL BE AMENDED AS FOLLOWS:

**Section 101.1 TITLE.** These regulations shall be known as the Fire Code of *EDHCWD*, hereinafter referred to as "this code".

SECTION 105.5 "REQUIRED OPERATIONAL PERMITS" IS AMENDED AS FOLLOWS:

**Section 105.5 Required operational permits**. The fire code official is authorized to issue operational permits for the operations set forth in Sections 105.5.2 through 105.5.525.

SECTION 105.5.55 "AUTOMOBILE WRECKING YARDS" IS ADDED AS FOLLOWS:

***Section 105.5.55 Automobile wrecking yards.*** *An operational permit is required for the operation of automobile wrecking yards.*

SECTION 105.6 "REQUIRED CONSTRUCTION PERMITS" IS AMENDED AS FOLLOWS:

**Section 105.6 required construction permits.** The fire code official is authorized to issue construction permits for work as set forth in sections 105.6.1 through 105.6.246.

SECTION 105.6.25 "AUTOMOBILE WRECKING YARDS" IS ADDED AS FOLLOWS:

***Section 105.6.25 Automobile wrecking yards***. *Construction permits are required for the installation of or modification to automobile wrecking yards.*

SECTION 105.6.26 "TRAFFIC CALMING DEVICES" IS ADDED AS FOLLOWS:

***105.6.26 Traffic calming devices**. Construction permits are required for the installation or modification of traffic calming devices.*

SECTION 107.5 "PERMIT, PLAN REVIEW AND INSPECTION FEES" SHALL BE ADDED AS FOLLOWS:

***Section 107.5 Permit.** A schedule of fees adopted by the district board of directors for plan review, inspections and the issuance of permits by the district may be found in the most current district fee schedule (Health & Safety Code 17951).*

SECTION 107.5.1 "COST RECOVERY FEES" SHALL BE ADDED AS FOLLOWS:

***Section 107.5.1 Cost Recovery Fees**. Fire service fees may be charged to any person, firm, corporation or business that through negligence, violation of the law, or as a result of carelessness, is responsible for the cause of the district to respond to the scene of an incident. A district board may charge a fee to cover the cost of any service which the district provides or the cost of enforcing any regulation for which the fee is charged (Health & Safety Code 13916). The fee shall not exceed the actual cost of suppressing the fire and/or responding to the scene of an incident.*

SECTION 107.7 "ADMINISTRATIVE COSTS" SHALL BE ADDED AS FOLLOWS:

***Section 107.7 Administrative Costs**. When a test or inspection is scheduled, and the contractor fails to perform to the satisfaction of the authority having jurisdiction (AHJ), the AHJ may bill the contractor for actual time spent traveling to and from the test/inspection location and the time spent at the test/inspection site as well as administrative costs.*

SECTION 111.5 "APPEAL PROCEDURES AND TIMELINES" SHALL BE ADDED AS FOLLOWS:

***Section 111.5 Appeal Procedures and Timelines**. Any person or entity who believes they may be adversely affected by an order, decision, or determination made by the fire code official through a written notice may appeal this matter within 15 calendar days of the postmark on the notice. All such appeals shall be filed in writing with the Secretary of the Governing Board for the district. A timely appeal shall stay further action by the fire code official until the matter is determined by the Appeal Board as outlined in Section 109.2, unless the issue poses an imminent fire or life safety hazard to members of the public. The fire code official shall notify the appellant by certified mail of the date and time of such hearing. The hearing shall be scheduled to take place no sooner than 20 calendar days from the date shown on the certified mail. The appellant shall have the right to appear in person or by agent at the hearing and present oral, written and/or photographic evidence to the Appeal Board.*

SECTION 112.4 "VIOLATION PENALTIES" SHALL BE AMENDED AS FOLLOWS:

**Section 112.4 Violation Penalties.** Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter, repair or do work in violation of the approved construction documents or directive of the fire code official,

or of a permit or certificate used under provisions of this code, shall be guilty of a *misdemeanor or infraction, at the discretion of the prosecuting attorney or agency*, punishable by a fine not more than *$100.00 for a first violation; A fine not exceeding $500.00 for a second violation of the same provision within one year; A fine not exceeding $1000.00 for each additional violation of the same provision within one year*, or by imprisonment not exceeding *180 days*, or both such fine and imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense. (*Health & Safety Code Sections 13145 and 17995*).

SECTION 112.4.2 "CITATIONS" SHALL BE ADDED AS FOLLOWS:

***Section 112.4.2 Citations***. *The Fire Chief, or his/her duly authorized representative, may issue citations for infractions or misdemeanor violations of this code pursuant to Section 13871 of the Health & Safety Code of the State of California and Chapter 5c (commencing with Section 853.6) of Title 3 of Part 2 of the Penal Code of the State of California.*

SECTION 113.4 "FAILURE TO COMPLY" SHALL BE AMENDED AS FOLLOWS:

**Section 113.4 Failure to Comply**. Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be *punishable by a fine or imprisonment or both as described in Section 112.4 (Health & Safety Code Sections 13145 and 17995).*

**Chapter 2**

SECTION 202 "CAMPFIRE" SHALL BE ADDED AS FOLLOWS:

***CAMPFIRE.*** *A fire which is used for cooking, personal warmth, lighting, or aesthetic purposes.*

SECTION 202 "DISTRICT" SHALL BE ADDED AS FOLLOWS:

***DISTRICT***. *The district and all other areas within the exterior boundaries thereof now or hereafter established.*

SECTION 202 "DRIVEWAY" SHALL BE ADDED AS FOLLOWS:

***DRIVEWAY.*** *A vehicular access that serves up to two (2) parcels with no more than two (2) residential units and any number of non-commercial or industrial buildings on each parcel.*

SECTION 202 "EXECUTIVE BODY" SHALL BE ADDED AS FOLLOWS:

***EXECUTIVE BODY***. *The Board of Directors of the District.*

SECTION 202 "FIRE CHIEF" SHALL BE ADDED AS FOLLOWS:

***FIRE CHIEF***. *The Chief Executive Fire Officer of the Fire department/district serving the jurisdiction or a duly authorized representative.*

SECTION 202 "FIRE HAZARD" SHALL BE ADDED AS FOLLOWS:

***FIRE HAZARD**. Any condition, arrangement, or act which will increase, or may cause an increase of, the hazard or menace of fire to a greater than customarily recognized as normal by-persons in the public service of preventing, suppressing or extinguishing fire; or which may obstruct, delay, or hinder, or may become the cause of obstruction, delay or hinderance to the prevention, suppression, or extinguishment of fire.*

SECTION 202 "OPEN BURNING" SHALL BE AMENDED AS FOLLOWS:

**OPEN BURNING.** The burning of materials wherein products of combustion are emitted directly into the ambient air without passing through a stack or chimney from an enclosed chamber. Open burning does not include road flares, smudge-pots and similar devices associated with safety or occupational uses typically considered open flames. For the purpose of this definition, a chamber shall be regarded as enclosed when, during the time combustion occurs, only apertures, ducts, stacks, flues or chimneys necessary to provide combustion air and permit the escape of exhaust gas are open.

*Open burning shall also include campfires, bonfires, portable outdoor fireplaces, ceremonial fires, and recreational fire as defined in the Fire Code.*

*Exception:*

1. *UL or ASMI listed LPG or natural gas outdoor flame devices, such as gas BBQ's or gas fire pits that comply with the Fire Code.*
2. *For one-or two-family dwellings, fixed or portable outdoor flame devices that meet the following:*
   a. *Devices shall comply with the Fire Code.*
   b. *Devices shall be used per manufacturer's specifications.*
   c. *Minimum 10-foot clearance from device to all flammable material and vegetation.*
   d. *No burning shall be conducted during high or extreme fire weather conditions (e.g., National Weather Service Red Flag Warnings).*
3. *Campfires on private lands. Where required by the fire code official, a permit shall be issued by the fire code official.*
4. *Ceremonial and/or religious burning with the following safety measures:*
   a. *Maximum 4-foot x 4-foot burn area.*
   b. *Minimum 10-foot clearance from edge of burn area to all flammable material and vegetation.*
   c. *An approved water supply is located within 500-feet of the burn area.*
   d. *The burn area is located no less than 30-feet from adjoining property lines.*
   e. *An adult is present with a shovel until the fire is extinguished.*
   f. *No burning shall be conducted during high or extreme fire weather conditions (e.g., National Weather Service Red Flag Warnings).*

SECTION 202 "TRAINED CROWD MANAGER" SHALL BE ADDED AS FOLLOWS:

***TRAINED CROWD MANAGER.*** *Standby personnel, usually a security guard or usher personnel, who are trained in the proper procedure to exit people from a tent or other place of public assemblage in an orderly and calm fashion in the event of an emergency*

**Chapter 3**

SECTION 302.1 "DEFINITIONS" SHALL BE AMENDED AS FOLLOWS:
**3D PRINTER.**
**ADDITIVE MANUFACTURING.**
**BONFIRE.**
***CAMPFIRE.***
**HI-BOY.**
**HIGH-VOLTAGE TRANSMISSION LINE.**
**OPEN BURNING.**
**PORTABLE OUTDOOR FIREPLACE.**
**POWERED INDUSTRIAL TRUCK.**
**RECREATIONAL FIRE.**
**SKY LATTERN.**

SECTION 307.4.4 "OPEN BURNING RESTRICTIONS" SHALL BE ADDED AS FOLLOWS:

***Section 307.4.4 Open Burning Restrictions****. Open burning on all lands within the jurisdiction of the El Dorado Hills Fire Department (EDHFD), including the Local Response Area (LRA), is prohibited when the California Department of Forestry and Fire Protection (Cal Fire) issues a burn suspension in the State Responsibility Area (SRA). This prohibition shall be made effective 24-hours following its commencement in the SRA.*

*Open burning is also prohibited on all lands within the jurisdiction of EDHFD at any time the fire code official determines that atmospheric conditions or other local circumstances make such fires hazardous, including factors such as high winds, low fuel moisture, fire weather, the issuance of red flag warnings, severe threat of wildland fire, or present risk of destruction by wildfire to life, wildlife, property, or natural resources.*

Chapter 4

SECTION 401.2.1 "PRE-FIRE PLANS" IS ADDED AS FOLLOWS:

***Section 401.2.1 Pre-fire plans****. Where required by the fire code official, a pre-fire plan shall be provided and approved by the fire code official for all new commercial structures.*

**Chapter 5**

SECTION 503.2.1 "DIMENSIONS" SHALL BE AMENDED AS FOLLOWS:

**Section 503.2.1 Dimensions**. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6096 mm), exclusive of shoulders, *as measured from face of curb to face of curb*, except for approved security gates in accordance with Section 503.6, and an

unobstructed vertical clearance of not less than *15 feet. Driveways shall have an unobstructed width of not less than 12 feet wide.*

SECTION 503.2.5 "DEAD ENDS" SHALL BE AMENDED AS FOLLOWS:

**Section 503.2.5 Dead Ends**. Dead-end fire apparatus access roads *and driveways* in excess of 150 feet (45,720 mm) in length shall be provided with an approved area for turning around fire apparatus.

SECTION 503.2.6 "BRIDGES AND ELEVATED SURFACES" SHALL BE AMENDED AS FOLLOWS:

**Section 503.2.6 Bridges and Elevated Surfaces.** Where a bridge or an elevated surface is part of a fire apparatus access road, the bridge shall be constructed and maintained in accordance with AASHTO HB-17, *the current El Dorado County Transportation Division Bridge Standard or Appendix D of the current California Fire Code, whichever is more restrictive.* Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus. Vehicle load limits shall be posted at both entrances to bridges when required by the fire code official. Where elevated surfaces designed for emergency vehicle use are adjacent to surfaces that are not designed for such use, approved barriers, approved signs or both shall be installed and maintained where required by the fire code official.

SECTION 503.3.1 "NO PARKING IN FIRE LANES" SHALL BE ADDED AS FOLLOWS:

***Section 503.3.1 No Parking In Fire Lanes**. No person shall stop, park, or leave standing any vehicle, whether attended or unattended, except when necessary to avoid conflict with other traffic or in compliance with the directions of the Fire Chief, or his/her duly authorized representative, Peace Officer or official traffic control device along the edge of any highway, at any curb, or in any location in a publicly or privately owned or operated off-street parking facility, designated as a fire lane by the district with jurisdiction over the area in which the place is located. The designation shall be indicated (1) by a sign posted immediately adjacent to, and visible from, the designated place clearly stating in letters not less than one inch in height that the place is a fire lane, (2) by outlining or painting the place in red and, in contrasting color, marking the place with the words "FIRE LANE", which are clearly visible from a vehicle, or (3) by a red curb or red paint on the edge of the roadway upon which is clearly marked the words "FIRE LANE".*

SECTION 503.3.2 "NO PARKING IN FRONT OF HYDRANTS" SHALL BE ADDED AS FOLLOWS:

***Section 503.3.2 No Parking in Front of Hydrants**. No person shall stop, park, or leave standing any vehicle within 15 feet of a fire hydrant except as follows: (a) If the vehicle is attended by a licensed driver who is seated in the front seat and who can immediately move such vehicle in case of necessity, (b) If the vehicle is owned or operated by a fire department and is clearly marked as a fire department vehicle.*

SECTION 503.3.3 "FIRE LANES BASED ON ROAD WIDTH" SHALL BE ADDED AS FOLLOWS:

***Section 503.3.3 Fire Lanes Based on Road Width.*** *Fire lanes shall be based on road width as required in Appendix D as amended by the District.*

SECTION 503.6 "SECURITY GATES" IS AMENDED AS FOLLOWS:

**Section 503.6 Security Gates**. The installation of security gates across a fire apparatus access road shall be approved by the fire code official *and shall comply with the District gate standard.* Where security gates are installed, they shall have an approved means of emergency operation. The security gates and the emergency operation shall be maintained operational at all times. Electric gate operators, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed, and installed to comply with the requirements of ASTM F2200.

SECTION 505.1 "ADDRESS IDENTIFICATION" SHALL BE AMENDED AS FOLLOWS:

***Section 505.1 Address Identification.*** *Addresses for new and existing buildings shall comply with the District address standard as approved by the fire code official.* The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than 4 inches (102 mm) high with a minimum stroke width of $^1/_2$ inch (12.7 mm). Where required by the fire code official, address identification shall be provided in additional approved locations to facilitate emergency response. access is by means of a private road and the building cannot be viewed from the public way, a monument, pole or other sign or means shall be used to identify the structure. Address identification shall be maintained.

SECTION 507.5.1 "WHERE REQUIRED" SHALL BE AMENDED AS FOLLOWS:

**Section 507.5.1 Where Required**. Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 150 feet from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided where required by the fire code official.

**Exceptions:**

1. For Group R-3 and Group U occupancies, the distance requirement shall be 600 feet (183 m).

SECTION 509.3 "FIRE CONTROL ROOM" SHALL BE ADDED AS FOLLOWS:

***Section 509.3 Fire Control Room.*** *Fire sprinkler risers, fire alarm control panels, solar photovoltaic power system rapid shutoff switches, and other fire detection, suppression or similar control elements shall be located inside a single fire control room for the building. The fire control room shall have minimum dimensions of five feet by seven feet in size with a total usable area of not less than 35 square feet. The room shall be located within the building on an outside wall at a location approved by the Fire Code Official and shall be accessible from the exterior. An exterior access door with a clear width of not less than 32 inches and height of not less than 80 inches shall be provided for access into the room. A durable sign shall be affixed to the exterior of the door with the words "FIRE CONTROL ROOM" in letters not less*

*than 4 inches in height. A key box complying with Section 506 shall be installed on the exterior side of the fire control room door opening.*

*The room must be capable of maintaining a minimum temperature of 40 degrees Fahrenheit. A clearance of 12 inches shall be provided from the fire sprinkler risers to any adjacent walls. This room can be a shared with other building utilities or fire protection equipment that is not incompatible. An approved cabinet or container shall be provided to store record plans of the fire sprinkler system and other fire protection equipment. This room shall not be used for any other storage.*

> ***Exception:*** *One-and two-family dwellings, manufactured homes or similar uses defined as either a Group R-3, R3.1, or R-4 occupancy.*

SECTION 510.4.2.3 "STANDBY POWER" SHALL BE AMENDED AS FOLLOWS:

**Section 510.4.2.3 Standby power.** In-building, two-way emergency responder communication radio coverage systems shall be provided with dedicated standby batteries or provided with 2-hour standby batteries and connected to the facility generator power system in accordance with Section 1203. The standby power supply shall be capable of operating the in-building, two-way emergency responder communication coverage system at 100-percent system capacity for a duration of not less than 72 hours.

**Chapter 9**

SECTION 903.2 "WHERE REQUIRED" SHALL BE AMENDED AS FOLLOWS:

**Section 903.2 Where Required**. Approved automatic sprinkler systems *in new buildings and structures when constructed or relocated within the jurisdiction shall be provided in the locations* described in Sections 903.2.1 through 903.2.12 and Sections 903.2.14 through 903.2.23.

> ***Exception:*** *Agricultural buildings not under a special use permit used for commercial purposes.*

SECTION 903.2.1.1 "GROUP A-1" SHALL BE AMENDED AS FOLLOWS:

**Section 903.2.1.1 Group A.** An automatic sprinkler system shall be provided throughout stories containing Group A-1 occupancies and throughout all stories from the Group A-1 occupancy to and including the levels of exit discharge serving that occupancy where one of the following conditions exists:

1. The fire area exceeds *3,600* square feet.
2. The fire area has an occupant load of 300 or more.
3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.
4. The fire area contains a multi-theater complex

SECTION 903.2.1.2 "GROUP A-2" SHALL BE AMENDED AS FOLLOWS:

**Section 903.2.1.2 Group A-2**. An automatic sprinkler system shall be provided throughout stories containing Group A-2 occupancies and throughout all stories from the Group A-2

occupancy to and including the levels of exit discharge serving that occupancy where one of the following conditions exists:

1. The fire area exceeds *3,600* square feet;
2. The fire area has an occupant load of 100 or more.
3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.
4. The structure exceeds *3,600* square feet, contains more than one fire area containing a Group A-2 occupancy, and is separated into two or more buildings by fire walls of less than 4-hour fire-resistance rating without openings.

SECTION 903.2.1.3 "GROUP A-3" SHALL BE AMENDED AS FOLLOWS:

**Section 903.2.1.3 Group A-3**. An automatic sprinkler system shall be provided throughout stories containing Group A-3 occupancies and throughout all stories from the Group A-3 occupancy to and including the levels of exit discharge serving that occupancy where one of the following conditions exists:

1. The fire area exceeds *3,600* square feet.
2. The fire area has an occupant load of 300 or more.
3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.
4. The structure exceeds *3,600* square feet, contains more than one fire area containing exhibition and display rooms, and is separated into two or more buildings by fire walls of less than 4-hour fire-resistance rating without openings.

SECTION 903.2.1.4 "GROUP A-4" SHALL BE AMENDED AS FOLLOWS:

**Section 903.2.1.4 Group A-4.** An automatic sprinkler system shall be provided throughout stories containing Group A-4 occupancies and throughout all stories from the Group A-4 occupancy to and including the levels of exit discharge serving that occupancy where one of the following conditions exists:

1. The fire area exceeds *3,600* square feet.
2. The fire area has an occupant load of 300 or more.
3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.

SECTION 903.2.3 "GROUP E" SHALL BE AMENDED AS FOLLOWS:

**Section 903.2.3 Group E**. An automatic sprinkler system shall be provided for Group E occupancies as follows:

1. Throughout all Group E fire areas greater than *3,600* square feet in area.
2. The Group E fire area is located on a floor other than a level of exit discharge serving such occupancies.

**Exception**: In buildings where every classroom has not fewer than one exterior exit door at ground level, an automatic sprinkler system is not required in any area below the lowest level of exit discharge serving that area.

3. The Group E fire area has an occupant load of 300 or more.
4. In rooms or areas with special hazards such as laboratories, vocational shops and other such areas where hazardous materials in quantities not exceeding the maximum allowable quantity are used or stored.
5. Throughout any Group E structure greater than *3,600* square feet in area, which contains more than one fire area, and which is separated into two or more buildings by fire walls of less than 4-hour fire resistance rating without openings.
6. For public school state funded construction projects see Section 903.2.19.
7. For public school campuses, Kindergarten through 12th grade, see Section 903.2.20

SECTION 903.2.4 "GROUP F-1" SHALL BE AMENDED AS FOLLOWS:

**Section 903.2.4 Group F-1**. An automatic sprinkler system shall be provided throughout all buildings containing a Group F-1 occupancy where one of the following conditions exists:

1. A Group F-1 fire area exceeds *3,600* square feet.
2. A Group F-1 fire area is located more than three stories above grade plane.
3. The combined area of all Group F-1 fire areas on all floors, including any mezzanines, exceeds *3,600* square feet.

SECTION 903.2.7 "GROUP M" SHALL BE AMENDED AS FOLLOWS:

**Section 903.2.7 Group M**. An automatic sprinkler system shall be provided throughout buildings containing a Group M occupancy where one of the following conditions exists:

1. A Group M fire area exceeds *3,600* square feet.
2. A Group M fire area is located more than three stories above grade plane.
3. The combined area of all Group M fire areas on all floors, including any mezzanines, exceeds *3,600* square feet.
5. The structure exceeds *3,600* square feet, contains more than one fire area containing a Group M occupancy, and is separated into two or more buildings by fire walls of less than 4-hour fire resistance rating without openings.

SECTION 903.2.7.2 "GROUP M UPHOLSTERED FURNITURE OR MATTRESSES" SHALL BE AMENDED AS FOLLOWS:

**Section 903.2.7.2 Group M Upholstered Furniture or Mattresses**. An automatic sprinkler system shall be provided throughout a Group M fire area where the area used for the display and sale of upholstered furniture or mattresses exceeds *3,600* square feet.

SECTION 903.2.8.5 "MANUFACTURED HOMES" SHALL BE ADDED AS FOLLOWS:

***Section 903.2.8.5 Manufactured Homes**. An automatic fire sprinkler system shall be required in all new manufactured homes and multi-family manufactured homes intended for use as a one-and two-family dwelling. The design and installation of such systems shall be in accordance with California Code of Regulations, Title 25, §4300.*

***Exceptions:***

1. *Manufactured homes located within an existing mobile home park complying with California Health and Safety Code, Division 13, Part 2.1 or 2.3.*
2. *Manufactured homes that do not exceed 1,200 square feet in size and serve as an accessory dwelling unit, as defined in Government Code Section 658502; when the existing primary residence on the property is not required to comply with California Residential Code Section R313.2.*
3. *Manufactured homes that do not exceed 320 square feet in size.*

SECTION 903.2.9 "GROUP S-1" SHALL BE AMENDED AS FOLLOWS:

**Section 903.2.9 Group S-1.** An automatic sprinkler system shall be provided throughout all buildings containing a Group S-1 occupancy where one of the following conditions exists:

1. A Group S-1 fire area exceeds *3,600* square feet.
2. A Group S-1 fire area is located more than three stories above grade plane.
3. The combined area of all Group S-1 fire areas on all floors, including any mezzanines, exceeds *3,600* square feet.
4. A Group S-1 fire area used for the storage of commercial motor vehicles where the fire area exceeds *3,600* square feet.

SECTION 903.2.10 "GROUP S-2" SHALL BE AMENDED AS FOLLOWS:

**Section 903.2.10 Group S-2**. An automatic sprinkler system shall be provided throughout buildings classified as parking garages where any of the following conditions exist:

1. Where the fire area of the enclosed parking garage, in accordance with Section 406.6 of the California Building Code, exceeds *3,600* square feet.
2. Where the enclosed parking garage, in accordance with Section 406.6 of the California Building Code, is located beneath other groups.

   **Exception:** Enclosed parking garages located beneath Group R-3 occupancies.
3. Where the fire area of the open parking garage, in accordance with Section 406.5 of the California Building Code, exceeds *3,600* square feet.

SECTION 903.2.10.1 "COMMERCIAL PARKING GARAGES" SHALL BE AMENDED AS FOLLOWS:

**Section 903.2.10.1 Commercial Parking Garages.** An automatic sprinkler system shall be provided throughout buildings used for storage of commercial motor vehicles where the fire area exceeds *3,600* square feet.

SECTION 903.2.22 "GROUP B" SHALL BE ADDED AS FOLLOWS:

***Section 903.2.22 Group B**. An automatic sprinkler system shall be provided throughout all buildings containing Group B occupancies where the fire area exceeds 3,600 square feet.*

SECTION 903.2.23 "GROUP F-2" SHALL BE ADDED AS FOLLOWS:

***Section 903.2.23 Group F-2**. An automatic sprinkler system shall be provided throughout all buildings containing Group F-2 occupancies where the fire area exceeds 3,600 square feet.*

SECTION 903.6 "WHERE REQUIRED IN EXISTING BUILDINGS AND STRUCTURES" IS AMENDED AS FOLLOWS:

**Section 903.6 Where Required In Existing Buildings and Structures**. An automatic sprinkler system shall be provided in existing buildings and structures where required in Chapter 11 *and as follows:*

1. When there is a change in occupancy classification that results in an increased life safety or fire risk, as determined by the fire code official, and the structure exceeds 3,600 square feet, an automatic fire sprinkler system shall be installed throughout the building.
2. *In existing buildings 3,600 square feet or greater, other than one and two-family dwelling units, and agricultural buildings not under special use permit for commercial purposes, where the floor area of the building or structure is increased, such building or structure shall be made to conform to Section 903.2.*

   ***Exception**: When the building increase is less than 500 square feet.*
3. *In existing buildings 3,600 square feet or less, other than one-and two-family dwelling units, and agricultural buildings not under special use permit for commercial purposes, where the floor area of the building or structure is increased to a total square footage over 3,600 square feet, such building or structure shall be made to conform to Section 903.2.*

   ***Exception**: When the building increase is less than 500 square feet.*

SECTION 907.2. "WHERE REQUIRED – NEW BUILDINGS AND STRUCTURES" SHALL BE AMENDED AS FOLLOWS:

**Section 907.2. Where Required – New Buildings and Structures**. An approved fire alarm system installed in accordance with the provisions of this code and NFPA 72 shall be provided in new buildings and structures in accordance with Sections 907.2.1 through 907.2.~~29~~30 and provide occupant notification in accordance with Section 907.5, unless other requirements are provided by another section of this code.

Not fewer than one manual fire alarm box shall be provided in an approved location to initiate a fire alarm signal for fire alarm systems employing automatic fire detectors or waterflow detection devices. Where other sections of this code allow elimination of fire alarm boxes due to sprinklers or automatic fire alarm systems, a single fire alarm box shall be installed at a location approved by the enforcing agency.

**Exceptions**:

1. The manual fire alarm box is not required for fire alarm control units systems dedicated to elevator recall control, supervisory service and fire sprinkler monitoring.
2. The manual fire alarm box is not required for Group R-2 occupancies unless required by the fire code official to provide a means for fire watch personnel to initiate an alarm during a sprinkler system, impairment event. Where provided, the manual fire alarm box shall not be located in an area that is open to the public.
3. The manual fire alarm box is not required to be installed when approved by the fire code official.
4. *A fire alarm system is not required in one and two-family dwellings, agricultural buildings, and other occupancies classified as Group U not under special use permit and/or not used for commercial purposes (e.g. retail sales, food service, and/or special events).*
5. *Buildings with a floor area less than 500 square feet may be exempt, as determined by the fire code official based on building construction material and features, location, occupancy type, and distance to exposures.*

SECTION 907.2.1.4 "GROUP A UNDER 3,600 SQUARE FEET" SHALL BE ADDED AS FOLLOWS:

***Section 907.2.1.4 Group A Under 3,600 Square Feet.*** *An approved fire alarm system shall be installed in all group A buildings with a floor area less than 3,600 square feet.*

SECTION 907.2.2.3 "GROUP B UNDER 3,600 SQUARE FEET" SHALL BE ADDED AS FOLLOWS:

***Section 907.2.2.3 Group B Under 3,600 Square Feet.*** *An approved fire alarm system shall be installed in all group B buildings with a floor area less than 3,600 square feet.*

SECTION 907.2.3.11 "GROUP E UNDER 3,600 SQUARE FEET" SHALL BE ADDED AS FOLLOWS:

***Section 907.2.3.11 Group E Under 3,600 Square Feet.*** *An approved fire alarm system shall be installed in all group E buildings with a floor area less than 3,600 square feet.*

SECTION 907.2.4.1 "GROUP F UNDER 3,600 SQUARE FEET" SHALL BE ADDED AS FOLLOWS:

***Section 907.2.4.1 Group F Under 3,600 Square Feet.*** *An approved fire alarm system shall be installed in all group F buildings with a floor area less than 3,600 square feet.*

SECTION 907.2.5.2 "GROUP H UNDER 3,600 SQUARE FEET" SHALL BE ADDED AS FOLLOWS:

***Section 907.2.5.2 Group H Under 3,600 Square Feet.*** *An approved fire alarm system shall be installed in all group H buildings with a floor area less than 3,600 square feet.*

SECTION 907.2.6.6 "GROUP I UNDER 3,600 SQUARE FEET" SHALL BE ADDED AS FOLLOWS:

***Section 907.2.6.6 Group I Under 3,600 Square Feet.*** *An approved fire alarm system shall be installed in all group I buildings with a floor area less than 3,600 square feet.*

SECTION 907.2.7.2 "GROUP M UNDER 3,600 SQUARE FEET" SHALL BE ADDED AS FOLLOWS:

***Section 907.2.7.2 Group M Under 3,600 Square Feet.*** *An approved fire alarm system shall be installed in all group M buildings with a floor area less than 3,600 square feet.*

SECTION 907.2.8.4 "GROUP R-1 UNDER 3,600 SQUARE FEET" SHALL BE ADDED AS FOLLOWS:

***Section 907.2.8.4 Group R-1 Under 3,600 Square Feet.*** *An approved fire alarm system shall be installed in all group R-1 buildings with a floor area less than 3,600 square* feet.

SECTION 907.2.9.4 "GROUP R-2, R-2.1, R-2.2 UNDER 3,600 SQUARE FEET" SHALL BE ADDED AS FOLLOWS:

***Section 907.2.9.4 Group R-2, R-2.1, R-2.2 Under 3,600 Square Feet.*** *An approved fire alarm system shall be installed in all group R-2, R-2.1, R-2.2 buildings with a floor area less than 3,600 square feet.*

SECTION 907.2.10.1 "GROUP S UNDER 3,600 SQUARE FEET" SHALL BE ADDED AS FOLLOWS:

***Section 907.2.10.1 Group S Under 3,600 Square Feet.*** *An approved fire alarm system shall be installed in all group S buildings with a floor area less than 3,600 square feet.*

907.2.30 "TYPE I HOOD INSTALLATIONS" SHALL BE ADDED AS FOLLOWS:

***907.2.30 "Type I Hood Installations****. The requirement of installation, or replacement, of a Type I Hood System shall require a fire alarm/sprinkler monitoring system to be installed, or for the hood system to be connected to an existing fire alarm/sprinkler monitoring system for that building.*

907.6.5 "MONITORING" SHALL BE AMENDED AS FOLLOWS:

**907.6.5 Monitoring.** Fire alarm systems required by this chapter or by the California Building Code shall be monitored by an *approved, UL certified, Type A Full Service central, proprietary or remote station service, which gives audible and visual signals at a constantly attended location. All sprinklered buildings shall be monitored.*

***Exceptions:***

1. *One- and two-family dwellings (R-3 Occupancies and other occupancies classified as "U").*

2. *Agricultural buildings not under special use permit and/or not used for commercial purposes (e.g., retails sales, food service, and/or special events).*

SECTION 907.6.2.1 "SECONDARY POWER SUPPLY" SHALL BE ADDED AS FOLLOWS:

***SECTION 907.6.2.1 SECONDARY POWER SUPPLY.*** *Where required by the fire code official, in accordance with NFPA 72, the secondary power supply providing a minimum 24-hour power capacity under quiescent load (system operating in a non-alarm condition) shall be amended to a minimum 72-hour power capacity.*

***Exception:*** *The existence of an emergency back-up power supply that meets or exceed the requirements of California Fire Code Chapter 12.*

SECTION 907.9 "WHERE REQURIED IN EXISTING BUILDINGS" SHALL BE AMENDED AS FOLLOWS:

**SECTION 907.9 Where Required.** An approved fire alarm system shall be provided in existing buildings and structures where required in Chapter 11 and *in existing buildings with a floor area less than 3,600 square feet without an approved automatic sprinkler system, other than one- or two-family dwelling units, agricultural building not under special use permit for commercial purposes where a fire alarm detection system does not exist and the floor area of the building or structure is increased*

***Exception:*** *When the building increase is less than 500 square feet.*

**Chapter 12**

SECTION 1203.1.3 "INSTALLATION" SHALL BE AMENDED AS FOLLOWS:

**Section 1203.1.3 Installation.** Emergency power systems and standby power systems shall be installed in accordance with the California Building Code, the California Electrical Code, NFPA 110 and NFPA 111. *All buildings, other than one- and two-family dwelling units, and agricultural buildings not used for commercial purposes, with standby power, shall have a shunt trip device that disconnects all power sources to the building, approved by the fire code official. Existing installations shall be maintained in accordance with the original approval.*

**Chapter 33**

**SECTION 3311.3 "PREMISE IDENTIFICATION" SHALL BE ADDED AS FOLLOWS:**

***Section 3311.3 Premise Identification.*** *Prior to and during construction, an approved address sign shall be provided at each fire and emergency vehicle access road entry into the project.*

**SECTION 3313.1 "WHEN REQUIRED" SHALL BE AMENDED AS FOLLOWS:**

**Section 3313.1 When Required.** An approved water supply for fire protection, either temporary or permanent, shall be *installed and maintained in continuous operation* as soon as combustible building materials arrive on site, the commencement of vertical combustible

construction and on installation of a standpipe system in buildings under construction, in accordance with Sections 3313.2 through 3313.5.

**Exception:** The fire code official is authorized to reduce the fire-flow requirements for isolated buildings or a group of buildings in rural areas or small communities where the development of full fire-flow requirements is impractical.

**Chapter 50**

SECTION 5001.7 "LIABILITY FOR DAMAGES" SHALL BE ADDED AS FOLLOWS:

***Section 5001.7 Liability for Damages.*** *Any damages or cost resulting from the negligence, violation of the law, careless handling, spill or discharge of any hazardous materials shall constitute debt against any such person, firm or corporation causing such spill or discharge. This debt is collectible by the Fire Chief, or his/her duly authorized representative, in the same manner as in the case of an obligation under contract, expressed or implied.*

**Chapter 56**

SECTION 5601.2 "PERMIT REQUIRED" SHALL BE AMENDED AS FOLLOWS:

**Section 5601.2 Permit Required**. Permits shall be required as set forth in Section 105.5 and regulated in accordance with this section. *Where fireworks permits are required, they shall be issued by the Fire Chief, or his/her duly authorized representative, and the El Dorado County Board of Supervisors.*

**Chapter 57**

SECTION 5704.2.9.6.1 "LOCATIONS WHERE ABOVE-GROUND TANKS ARE PROHIBITED" SHALL BE AMENDED AS FOLLOWS:

**SECTION 5704.2.9.6.1 Locations Where Above-Ground Tanks are Prohibited.** Storage of Class I and Class II flammable liquids in above-ground tanks outside of buildings is prohibited within the limits established by law as the limits of districts in which such storage is prohibited. *Storage of Class I and Class II flammable liquids in above-ground tanks outside of buildings is prohibited unless approved by the fire code official.*

SECTION 5706.2.4.4 "LOCATIONS WHERE ABOVE-GROUND TANKS ARE PROHIBITED" SHALL BE AMENDED AS FOLLOWS:

**SECTION 5706.2.4.4 Locations Where Above-Ground Tanks are Prohibited.** The storage of Class I and Class II liquids in above-ground tanks is prohibited within the limits established by law as the limits of districts in which such storage is prohibited. *Storage of Class I and Class II liquids in above-ground tanks is prohibited unless approved by the fire code official.*

**Chapter 58**

SECTION 5806.2 "LIMITATIONS" SHALL BE AMENDED AS FOLLOWS:

**SECTION 5806.2 Limitations**. Storage of flammable cryogenic fluids in stationary containers outside of buildings is prohibited within the limits established by law as the limits of districts in which such storage is prohibited. *Storage of flammable cryogenic fluids in stationary containers outside of buildings is prohibited unless approved by the fire code official.*

**Chapter 61**

SECTION 6104.2 "MAXIMUM CAPACITY WITHIN ESTABLISHED LIMITS" SHALL BE AMENDED AS FOLLOWS:

**SECTION 6104.2 Maximum Capacity within Established Limits**. Within the limits established by law restricting the storage of liquefied petroleum gas for the protection of heavily populated or congested areas, the aggregate capacity of any one installation shall not exceed a water capacity of 2,000 gallons. *The storage of liquefied petroleum gas in excess of an aggregate of 2,000-gallon water capacity when located at least one-half (1/2) mile from property zoned or designated for residential use and at least one-half (1/2) mile from existing residential development with a density greater than one (1) dwelling unit per acre and at least one-half (1/2) mile from any hotel or motel is allowed when approved by the fire code official, and a special/conditional use permit is issued by the County of El Dorado.*

*Dispensing within established limits. Within the limits established by law restricting the dispensing of liquefied petroleum gas for the protection of heavily populated or congested areas, the aggregate capacity of any one installation shall not exceed a water capacity of 2,000 gallons. The dispensing of liquefied petroleum gas in excess of an aggregate of 2,000-gallon water capacity when located at least one-half (1/2) mile from property zoned or designated for residential use and at least one-half (1/2) mile from any hotel or motel is allowed when approved by the fire code official and a special/conditional use permit is issued by the County of El Dorado.*

**Chapter 80**

SECTION 80, NFPA 1-22, CHAPTER 22 "AUTOMOTIVE WRECKING YARDS" IS ADOPTED, AMENDED SECTIONS AS FOLLOWS:

**Revise Section 22.3 as follows:**

**22.3** Fire department access roads shall be in accordance with the California Fire Code, Section 503 and Appendix D.

**Add new Section 22.10 as follows:**

**22.10** Stored vehicles, boats, recreational vehicles, parts, and equipment shall not be stored within 30 feet of adjacent property lines.

SECTION 80, NFPA, 13D-22 – "STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS IN ONE-AND TWO FAMILY DWELLINGS AND MANUFACTURED HOMES" IS AMENDED AS FOLLOWS: 903.3.1.3, 903.3.5.1.1

**NFPA 13D, Amended Sections as follows:**

**Add new Section 4.6 as follows:**

**4.6** *Residential fire sprinkler systems installed in all new one-and two-family dwellings shall utilize a "Passive Purge" system design unless otherwise approved by the fire code official.*

> ***Exception:*** *Manufactured home installed, tested and approved by the California Department of Housing and Community Development.*

**Revise Section 5.1.1.2 as follows:**

**5.1.1.2** *A supply of at least one of each type and temperature sprinkler used within the premises shall be maintained on the property at an approved location. Spare sprinklers shall be kept in a mounted and accessible cabinet.*

**Revise Section 7.6 as follows:**

**7.6** *A local audio/visual device activated upon water flow shall be provided on all fire sprinkler systems in homes at an approved location on the exterior of the dwelling.*

**Revise Section 11.2.1.1 as follows:**

**11.2.1.1** Where a fire department pumper connection is not provided, the system shall be hydrostatically tested at *a minimum pressure of 150 pounds per square inch gauge for no less than a 30-minute duration without evidence of leakage. Such test shall be witnessed by the fire code official.*

**Appendix B – Fire Flow Requirements for Buildings**

TABLE B105.1(1) "REQUIRED FIRE FLOW FOR ONE- AND TWO-FAMILY DWELLINGS, GROUP R-3, AND R-4 BUILDINGS AND TOWNHOUSES" SHALL BE AMENDED AS FOLLOWS:

**TABLE B105.1(1) REQUIRED FIRE FLOW FOR ONE- AND TWO-FAMILY DWELLINGS, GROUP R-3, AND R-4 BUILDINGS AND TOWNHOUSES**

| FIRE-FLOW CALCULATION AREA (square feet) | AUTOMATIC SPRINKLER SYSTEM (Design Standard) | MINIMUM FIRE-FLOW (gallons per minute) | FLOW DURATION (hours) |
|---|---|---|---|
| 0 – 3,600 | No automatic sprinkler system | 1,000 | 1 |

| | | | |
|---|---|---|---|
| 3,601 and greater | No automatic sprinkler system | Value in Table B105.1(2) | Duration in Table B105.1(2) at the required fire-flow rate |
| *MAJOR SUBDIVISIONS (5 PARCELS OR GREATER)* | | | |
| 0 – 3,600 | Section 903.3.1.3 of the CA Fire Code or Section 313.3 of the CA Residential Code | *1,000* | *1* |
| 3,601 and greater | Section 903.3.1.3 of the CA Fire Code or Section 313.3 of the CA Residential Code | 1/2 value of Table B105.1(2) *(min. 1000 GPM)* | 2 |
| *OTHER RESIDENTIAL DEVELOPMENT* | | | |
| 0 – 3,600 | Section 903.3.1.3 of the CA Fire Code or Section 313.3 of the CA Residential Code | 500 | *1* |
| 3,601 and greater | Section 903.3.1.3 of the CA Fire Code or Section 313.3 of the CA Residential Code | 1/2 value of Table B105.1(2) *(min. 750 GPM)* | 1 |

TABLE B105.2 "REQUIRED FIRE FLOW FOR BUILDINGS OTHER THAN ONE- AND TWO-FAMILY DWELLINGS, GROUP R-3, AND R-4 BUILDINGS AND TOWNHOUSES" SHALL BE AMENDED AS FOLLOWS:

**TABLE B105.2 REQUIRED FIRE FLOW FOR BUILDINGS OTHER THAN ONE- AND TWO-FAMILY DWELLINGS, GROUP R-3, AND R-4 BUILDINGS AND TOWNHOUSES**

| AUTOMATIC SPRINKLER SYSTEM (Design Standard) | MINIMUM FIRE-FLOW (gallons per minute) | FLOW DURATION (hours) |
|---|---|---|
| No automatic sprinkler system | Value in Table B105.1(2) | Duration in Table B105.1(2) |
| Section 903.3.1.1 of the CA Fire Code | 25% of the value in Table B105.1(2) [b] | Duration in Table B105.1(2) at the reduced flow rate |
| | | |

b. The reduced fire flow shall not be less than 1,500 gpm

DS RPJ DS CF DS JH

**Appendix D – Fire Apparatus Access Roads**

SECTION D103.1 "ACCESS ROAD WIDTH WITH A HYDRANT" SHALL BE AMENDED AS FOLLOWS:

**Section D103.1 Access Road Width with a Hydrant**. Where a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26 feet (7925 mm), exclusive of shoulders (see Figure D103.1).

***Exception**: Driveways*

SECTION D103.2 "GRADE" SHALL BE AMENDED AS FOLLOWS:

**SECTION D103.2 Grade**. Fire apparatus access roads *and driveways* shall not exceed *15.9% in grade unless approved by the fire code official or by the El Dorado County amended California Public Resource Code Title 14 / Design and Improvement Standards Manual.*

SECTION D103.3 "TURNING RADIUS" SHALL BE AMENDED AS FOLLOWS:

**SECTION D103.3 Turning Radius**. The minimum turning radius shall be determined by the fire code official; *and shall not include curb and gutter.*

SECTION D103.5 "FIRE APPARATUS ACCESS ROAD GATES" SHALL BE AMENDED AS FOLLOWS:

**SECTION D103.5 Fire Apparatus Access Road Gates**. Gates securing the fire apparatus access roads shall comply with all of the following criteria:

1. Where a single gate is provided, the gate width shall be not less than 20 feet (6096 mm). Where a fire apparatus road consists of a divided roadway, the gate width shall be not less than 15 feet (3658 mm).
2. Gates shall be of the horizontal swing, horizontal slide, vertical lift or vertical pivot type.
3. Construction of gates shall be of materials that allow manual operation by one person.
4. Gate components shall be maintained in an operative condition at all times and replaced or repaired when defective.
5. Electric gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. Emergency opening devices shall be approved by the fire code official.
6. Methods of locking shall be submitted for approval by the fire code official.
7. Electric gate operators, where provided, shall be listed in accordance with UL 325.
8. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F2200.

SECTION D103.6.1 "ROADS 20 TO 29 FEET IN WIDTH" SHALL BE AMENDED AS FOLLOWS:

**SECTION D103.6.1 Roads 20 to *29* feet in width.** Fire lane signs as specified in Section D103.6 shall be posted on both side of fire apparatus access roads that are 20 to *29* feet wide (6096 to *8534.4* mm).

SECTION D103.6.2 "ROADS MORE THAN *29* FEET IN WIDTH" SHALL BE AMENDED AS FOLLOWS:

**SECTION D103.6.2 Roads more than *29* feet in Width.** Fire lane signs as specified in Section D103.6 shall be posted on one side of fire apparatus access roads more than *29* feet wide (8534.4 mm) and less than *36* feet wide (*10972.8* mm).

SECTION D104.4 "CIRCUMFERENTIAL FIRE APPARATUS ACCESS ROADS" SHALL BE ADDED AS FOLLOWS:

***SECTION D104.4 Circumferential Fire Apparatus Access Roads**. When required by the fire code official, a fire apparatus access road shall be constructed to encompass the entirety of a structure and shall provide a continuous means of emergency vehicle access.*

**SECTION 4: CONFLICT**

That Ordinance No. 2019-01 of the EDHCWD, and all other ordinances or parts of ordinances herewith are hereby repealed.

**SECTION 5: SEVERABILITY**

If any Ordinance, article, subsection or subdivision thereof, provision, sentence, clause or phrase of this code, or any application thereof, is for any reason held to be invalid by a court of competent jurisdiction, such decision shall not affect the remaining provisions of this code, which can be given effect without the invalid portions and, therefore, such invalid portions are declared to be severable. The EDHCWD hereby declares that it would have enacted this Ordinance and each of its articles, sections, subsections, or subdivisions thereof, provisions, sentences, clauses or phrases irrespective of the fact that one or more of them is declared invalid.

**SECTION 6: EFFECTIVE DATE AND PUBLICATION**

This Ordinance shall take effect thirty (30) days after its adoption. The EDHCWD Board Secretary is directed to publish this ordinance in a newspaper of general circulation in the District. In lieu of publication of the full text of the ordinance, a summary of the ordinance may be published by the by the Board Secretary within fifteen (15) days after its passage and a

certified copy shall be posted in the office of the EDHCWD pursuant to *Government Code Section 36933(c) (1)*.

The above Ordinance was introduced at a meeting of the Board of Directors of the EDHCWD on September 15, 2022, and it was then read for the first time. A public hearing was set for the Ordinance to be read for the second time on October 20, 2022 and approved by the following vote:

PASSED AND ADOPTED by the Board of Directors of the EDHCWD this, 20th day of October, 2022.

AYES: 5
NOES: 0
ABSENT: 0
ABSTAIN: 0

Bobbi Bennett, Board President

ATTEST:

Jessica Braddock, Board Secretary

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# Appendix H: EDHCWD Ordinance 2023-01 (Unimproved Parcel Maint.)

**EL DORADO HILLS COUNTY WATER DISTRICT**

**EL DORADO HILLS FIRE DEPARTMENT**

**ORDINANCE NO. 2023-01**

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BE IT ORDAINED BY THE BOARD OF DIRECTORS OF THE EL DORADO HILLS COUNTY WATER DISTRICT AS FOLLOWS:

**AN ORDINANCE OF THE EL DORADO HILLS COUNTY WATER DISTRICT RELATED TO HAZARDOUS VEGETATION MANAGEMENT ON UNIMPROVED PARCELS, AND DECLARING CERTAIN HAZAROUS VEGETATION AND COMBUSTIBLE MATERIALS A PUBLIC NUISANCE, AND PROVIDING FOR THE REMOVAL THEREOF.**

Be it ORDAINED by the Board of Directors of the El Dorado Hills County Water District (EDHCWD), also known as the El Dorado Hills Fire Department:


Section 1: **FINDINGS OF FACTS**
Section 2: **APPLICATION OF ORDINANCE**
Section 3: **DEFINITONS**
Section 4: **CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)**
Section 5: **CLEARANCE OF HAZARDOUS VEGETATION ON UNIMPROVED PARCELS**
Section 6: **ACCEPTABLE METHODS OF CLEARANCE**
Section 7: **DUTY TO ABATE HAZARDOUS VEGETATION AND COMBUSTIBLE MATERIAL**
Section 8: **CORRECTIVE ACTIONS**
Section 9: **INSPECTIONS BY THE EL DORADO HILLS FIRE DEPARTMENT**
Section 10: **REOCCURRING FIRE HAZARD**
Section 11: **PENALTIES**
Section 12: **ABATEMENT OF NUISANCE BY FIRE CODE OFFICIAL**
Section 13: **ABATEMENT PROCEDURES**
Section 14: **REAL ESTATE TRANSACTIONS**
Section 15: **CONFLICT**
Section 16: **SEVERABILITY**
Section 17: **EFFECTIVE DATE AND PUBLICATION**

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SECTION 1: **FINDINGS OF FACTS**

1.1 The El Dorado Hills County Water District (EDHCWD), also known as the El Dorado Hills Fire Department, is an independent water district established under Division 12, Part 2, Article 7, Section 31120[1] of the State Water Code; and

1.2 It is the intent of the Governing Board of EDHCWD that this Ordinance shall apply to an annual program for the Abatement of the growth and/or accumulation of weeds, grasses, shrubs, dormant brush, slash, tree limbs, hazardous vegetation and combustible materials on all designated Unimproved Parcels within the EDHCWD and maintenance of those parcels to prevent vegetation from growing back; and

1.3 All parcels within the EDHCWD have been identified and designated as being within either a State Responsibility Area (SRA) or Local Responsibility Area (LRA) Moderate, High or Very High Fire Hazard Severity Zone by the California Department of Forestry and Fire Protection (CAL FIRE) in accordance with the Fire and Resource Assessment Program (FRAP) Map; and

1.4 During the fire season, the EDHCWD generally has a dry, arid climate conducive to wildfires. EDHCWD has a very diverse and complex landscape, which includes dry, brush-covered, and grass-covered wildlands, mountainous areas, and other terrains which are home to many sensitive plant and animal species. Many of the EDHCWD's native and non-native plant species can be highly combustible during normal dry periods and have contributed to significant wildfires within the EDHCWD. Difficult topography, terrain, and weather conditions exacerbate the fire danger and the difficulty of fighting wildfires, and have resulted in catastrophic fire losses to life, property, and the environment; and

1.5 Catastrophic wildfire events pose a serious threat to the preservation of public peace, health and safety within any wildland urban interface and intermix communities. The proper implementation and enforcement of hazardous fuel regulations and landscaping requirements have been proven to reduce the impact from destructive wildfires through the mitigation of hazardous fuel conditions around homes and roadways; and

1.6 Wildfires with extreme fire behavior are occurring more often and growing larger in size. Eighteen (18) of the twenty (20) most destructive wildland fires in the State of California have occurred between 2002-2022. The County of El Dorado has a history of destructive wildfires which have burned within its boundaries. These include the 2007 Angora Fire, 2014 King Fire,

[1] A district may exercise any of the powers, functions, and duties which are vested in, or imposed upon, a fire protection district pursuant to the Fire Protection District Law of 1987, Part 3 (commencing with Section 13800) of Division 12 of the Health and Safety Code.

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2021 Caldor Fire and the 2022 Mosquito Fire. Climate change stressors, such as increased average air temperature, precipitation variability, reduced snowpack, drought and tree mortality, will lead to an increased frequency of large wildfires that will create adverse impacts on local communities in the County of El Dorado, including both El Dorado Hills and Latrobe; and

1.7 Of paramount importance to the Governing Board of EDHCWD and the citizens of El Dorado Hills and Latrobe are the protection of lives and structures from the threat of wildfire, and the safety of public safety personnel during wildfires. The proper maintenance of defensible space on Unimproved Parcels benefits property owners, public safety personnel, and all citizens of both El Dorado Hills and Latrobe by dramatically increasing the likelihood that structures will survive a wildfire, provides for firefighter safety during a wildfire, and generally aids in the protection of lives, property, and the environment; and

1.8 The Governing Board of EDHCWD finds and declares that the uncontrolled growth and/or accumulation of weeds, grasses, hazardous vegetation and combustible materials or obstructions on sidewalks, streets, and on lands or lots within the EDHCWD is dangerous or injurious to neighboring property and the health, safety, and welfare of residents of the EDHCWD. Such growth and accumulation constitute a public nuisance in that it creates fire hazards, reduces the value of private property, promotes blight and deterioration, invites plundering, constitutes an unattractive nuisance, and creates a hazard to the health, safety, and general welfare of the public; and

1.9 The purpose of this Ordinance is to provide for the removal of hazardous vegetation and combustible material from around the exterior of improvements situated in the jurisdiction of the EDHCWD to reduce the potential for fire and to promote the public health, safety, and welfare of the community. It is the further purpose of this Ordinance to establish a hazardous vegetation reduction program that provides a process to identify and abate hazardous vegetation on parcels and protect the lives and property of the citizens of the EDHCWD, while at the same time protecting sensitive plant and animal species and protecting against significant erosion and sedimentation. The removal of hazardous vegetation in the areas subject to this Ordinance is recognized as an essential action homeowners and property owners can take to increase the chances that homes, structures and other property will survive a wildfire, while protecting the natural environment. Regular fuels management and modifications consistent with the requirements of this Ordinance is necessary to ensure adequate defensible space is achieved; and

1.10 The defensible space required by this Ordinance is necessary to significantly reduce the risk of transmission of flame or heat sufficient to ignite the structures, and there is no other feasible

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mitigation measure possible to reduce the risk of ignition or spread of wildfire to structures on adjacent improved parcels.

SECTION 2: **APPLICATION OF ORDINANCE**

2.1 This Ordinance is enacted pursuant to the powers granted to EDHCWD concerning the abatement of hazardous vegetation and combustible material as contained within California Health & Safety Code (HSC) Sections 13861(h), 13879 and 14875 et seq., and 14930 as well as authority granted under El Dorado County Codes & Ordinances (EDCC) Chapter 8.09, California Code of Regulations Title 14, Division 1.5, Chapter 7, Subchapter 3, Section 1299.01 to .05, California Code of Regulations Title 19 §3.07 and California Code of Regulations Title 24, Part 9 (California Fire Code) Chapter 49, as amended. Additional authority for the abatement of nuisances, establishment of procedures, and establishment of real property lines through EDHCWD is provided in *applicable governing codes and regulations of the State of California*.

2.2 This Ordinance applies to Unimproved Properties regardless of size. The abatement of Hazardous Vegetation posing a Fire Hazard in the community shall occur in accordance with the regulations described in this Ordinance by no later than May 1st each year unless otherwise directed by the Fire Code Official. It shall be the duty of every owner, occupant, and person in control of an Unimproved Parcel of land or having an interest therein, to abate therefrom, and from all Unimproved Parcels of land, all Hazardous Vegetation, that constitutes a Fire Hazard and public nuisance which may endanger or damage neighboring property or forestland.

SECTION 3: **DEFINITIONS**

As used in this Ordinance, the following definitions shall apply:

3.1 **Abate or Abatement** means an act used to remove, destroy, eliminate, seize, impound, or any action taken to mitigate a public nuisance.

3.2 **Abatement Costs** means all costs incurred by the EDHCWD to enforce this ordinance and to abate the hazardous vegetation or combustible material on any property pursuant to this Article, including physical abatement costs, administration fees and any additional actual costs incurred for the abatement proceeding(s), including attorney's fees, if applicable.

3.3 **Biomass** means all green waste material generated during a fuel treatment project. Biomass includes, without limitation, all grass, weeds, vegetation, and tree trimmings.

3.4 **Board** means the Governing Board for the El Dorado Hills County Water District.

3.5 **California Fire Code (CFC)** means code provisions found within California Code of Regulations Title 24, Part 9, as amended locally by EDHCWD.

3.6 **Citation or Administrative Citation** means a civil citation issued pursuant to the Ordinance stating there has been a violation of one or more provisions and setting the amount of the civil penalty to be paid by the responsible party.

3.7 **Combustible Material** means all rubbish, litter, or material of any kind other than hazardous vegetation that is combustible and endangers the public safety by creating a fire hazard.

3.8 **Days** means calendar days.

3.9 **Defensible Space** means that area described in California Code of Regulations Title 14, Division 1.5, Chapter 7, Subchapter 3, Section 1299.02, Government Code 51182, Public Resources Code Section 4291, El Dorado County Codes & Ordinances Chapter 8.09 and as otherwise described in this Code, which is adjacent to each side of a building or Structure and must be cleared of Hazardous Vegetation, or Combustible Material, as set forth in this Ordinance.

3.10 **EDHCWD** means the El Dorado Hills County Water District of El Dorado County, a political subdivision of the State of California.

3.11 **Fire Code Official** means the fire chief or other designated authority charged with the administration and enforcement of the code, or a duly authorized representative.

3.12 **Fire Hazard** means any condition, arrangement, act, or omission which:

3.12.1 Increases, or may cause an increase of hazard or menace of fire to a greater degree than that customarily recognized as normal by persons in the public service regularly engaged in preventing, suppressing, or extinguishing fire; or

3.12.2 May obstruct, delay, hinder, or interfere with the operations of a fire department or the egress of occupants in the event of fire.

3.13 **Fire Safe Plan** means a document prepared for a specific project or development proposed for a Wildland-Urban Interface (WUI) Fire Area. It describes ways to minimize and mitigate potential for loss from wildfire exposure.

3.14 **Hazardous Vegetation** means any vegetation that is combustible and endangers the public safety by creating a fire hazard. Hazardous Vegetation includes material that in its natural state will readily ignite, burn, and transmit fire from native or landscape plants to any structure or other vegetation. Hazardous Vegetation includes, but is not limited to, dry grass and leaves, brush, weeds, green waste, dead or dying trees, low-hanging branches, litter, or other flammable vegetation that can create a Fire Hazard. Hazardous Vegetation shall not include a commercial agricultural crop that is being actively grown and managed by the property owner or his or her legal tenant.

3.15 **Heritage Tree** means any mature tree or mature stand of trees designated by the County of El Dorado as having historic or cultural significance.

3.16 **Improved Parcel.** Means a portion of real property of any size which is located in an area primarily intended for residential uses, the area of which is determined by the assessor's maps and records, and which may be identified by an Assessor's Parcel Number, upon which a structure is located.

3.17 **Ladder Fuels** means fuels that can carry a fire vertically between or within Combustible Material or Hazardous Vegetation.

3.18 **Parcel** means a portion of real property of any size, the area of which is determined by the Assessor's maps and records, and which may be identified by an Assessor's Parcel Number.

3.19 **Real Estate Transaction** means the transfer of real property between individuals or entities.

3.20 **Responsible Person(s)** means an owner, tenant, occupant, lessor, manager, licensee, political subdivision, local government agency, municipality, or other person having control over a Structure or parcel of land or, to the fullest extent allowed by law, the parent or legal guardian of any person under 18 years who have done any act for which a penalty may be imposed under this Ordinance, or any other person required to comply with the provisions of the Ordinance and, any other lien holder, secured party, or other person who has properly recorded a security interest or other appropriate document evidencing an interest in the property, which has been recorded in the official records of the County.

3.21 **Roadway.** means a road or roadway that is any County street or road, other public road or alley, or private thoroughfare at least ten (10) feet wide that is ordinarily used for vehicular travel, open to public travel, and connects with a County road, state highway, other public road, private road or an alley which affords primary access to an abutting lot. This is a general term inclusive of all other terms such as fire lane, public street, private street, parking lot lane, and access roadway.

3.22 **Rubbish** includes, but is not limited to, non-putrescible Wastes, such as paper, cardboard, grass clippings, tree, or shrub trimmings, leaves and needles, wood chips used in landscaping or within five feet of a Structure, bedding, crockery, rubber tires, construction Waste and similar Waste materials.

3.23 **Slash** means the woody debris remaining on the ground after fuels management work: Slash includes, but is not limited to, treetops, branches, bark, chunks, cull logs, uprooted stumps, and uprooted trees.

3.24 **Softwood** means the wood from a conifer (such as pine, cedar, fir, or spruce) as distinguished from that of broadleaved trees.

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3.25 **Structure** means any dwelling, house, building, or other type of combustible construction, whether or not occupied, including but not limited to a wood fence located within the Defensible Space of any other Structure.

3.26 **Unimproved Parcel** means a portion of land of any size, the area of which is determined by the Assessor's maps and records and may be identified by an Assessor's Parcel Number (APN) upon which no Structure is located.

3.27 **Vegetation** means plants considered collectively, especially those found in a particular area or habitat. For the purposes of this Ordinance any tree less than six inches in diameter is considered Vegetation.

3.28 **Waste** means all putrescible and non-putrescible solid, semi-solid, and liquid wastes, including residential, commercial, and municipal garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, construction, and demolition debris, discarded home and industrial appliances, manure, vegetable or animal solid and semi-solid wastes, and other discarded solid wastes and semisolid wastes.

3.29 **Weeds** means Vegetation growing upon streets, sidewalks, or private property, including any of the following types:

3.29.1 Weeds which bear seeds of a downy or wingy nature.

3.29.2 Sagebrush, chaparral, and any other brush or weed which attains such large growth as to become, when dry, a fire menace to adjacent improved property.

3.29.3 Weeds which are otherwise noxious or dangerous.

3.29.4 Poison oak or poison ivy when the conditions constitute a menace to public health.

3.29.5 Dry grass, stubble, brush, litter, or other flammable materials which endanger public safety by creating a fire hazard.

3.29.6 Vegetation that is not pruned or is otherwise neglected so as to attain such large growth as to become, when dry, a fire menace to adjacent property.

3.30 **Wildfire Risk Area** means land that is covered with grass, grain, brush or forest, whether privately or publicly owned, which is so situated or is of such inaccessible location that a fire originating upon it would present an abnormally difficult job of suppression or would result in great or unusual damage through fire or such areas designated by the Fire Code Official.

## SECTION 4: CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

4.1 The subject project is Categorically Exempt (Class 4) from provisions of CEQA, pursuant to 14 CCR section 15304.

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4.2 The subject project is also exempt under the "common sense" exemption in 14 CCR section 15061(b)(3) because it does not involve activity that will have a significant effect on the environment.

SECTION 5: **CLEARANCE OF HAZARDOUS VEGETATION ON UNIMPROVED PARCELS**

5.1 All Hazardous Vegetation shall be removed on Unimproved Parcels that are one (1.0) acre in size or smaller.

5.1.1 All dry grass and other Weeds located on the Unimproved Parcel shall be removed or cut to a maximum height of two (2) inches.

5.1.2 Tree limbs within six (6) feet of the ground that permit fire to spread into the tree canopy and promote ember distribution shall be removed.

5.1.3 All downed trees, branches or woody debris smaller than eight (8) inches in diameter located on the ground shall be removed.

5.1.4 Slash, Rubbish and Combustible Material debris piles that can easily support fire ignition and spread shall be removed.

5.2 All Hazardous Vegetation shall be removed on Unimproved Parcels over one-acre (1.01) in size to provide defensible space within one hundred (100) feet from Structure(s) and twenty (20) feet along roadways.

5.2.1 All dry grass and other Weeds located within the designated defensible space zone shall be removed or cut to a maximum height of two (2) inches.

5.2.2 Tree limbs within six (6) feet of the ground that permit fire to spread into the canopy and promote ember distribution shall be removed.

5.2.3 All downed trees, branches, or woody debris smaller than eight (8) inches in diameter located on the ground shall be removed.

5.2.4 Slash, Rubbish and Combustible Material debris piles that can easily support fire ignition and spread shall be removed.

5.2.5 Hazardous Vegetation located within twenty (20) feet of Roadways shall be removed or cut to a maximum height of two (2) inches to reduce fire spread from roadside ignition sources and to maintain emergency evacuation routes for the local community.

*Exception*: Single specimens of trees if they do not form a means of readily transmitting fire as deemed by the El Dorado Hills Fire Department.

5.3 All Unimproved Parcels, regardless of size, shall comply with the following requirements:

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5.3.1 An Unimproved Parcel located within a development subject to a Fire Department approved Fire Safe Plan shall comply with the terms of that plan as required by CFC § 4903 regardless of size.

5.3.2 Unimproved Parcels located in areas designated by the Fire Code Official as a Wildfire Risk Area shall also be evaluated against the provisions of this Ordinance and EDCC Chapter 8.09.

5.3.3 Unimproved Parcels known to contain, or that the property owner believes, may contain habitat for rare, threatened or endangered plant or animal species shall contact the California Department of Fish and Wildlife at least ten (10) days in advance of vegetation management work. If the property owner is aware of any federal or state listed species then the appropriate wildlife agency shall be consulted prior to beginning work. It is possible that a permit may be required from the appropriate agencies (e.g., U.S. Fish and Wildlife Services and/or the California Department of Fish and Wildlife) prior to work beginning on the property.

5.3.4 Agricultural crops and active agricultural operation (e.g., farming, grazing, nursery and winegrape) lands as defined in the EDCC are exempt from meeting the regulations described in this Ordinance.

5.3.5 Heritage Trees are exempt from meeting the regulations described in this Ordinance.

5.3.6 All Slash, Rubbish, or Combustible Material debris shall be chipped or removed from the property.

5.3.7 The Fire Code Official may require greater clearance distances than that specified in Section 5, at their discretion, where public health safety or welfare so dictate, or where geographic, topographic or vegetation circumstances dictate.

## SECTION 6: ACCEPTABLE METHODS OF CLEARANCE

6.1 **Disking**. The discs shall be set at an angle sufficient to cut the sod loose and adequately bury the growth of weeds, grass, or noxious vegetation existing at the time. Disking shall include rototilling or cultivating. Disking shall be done each time the growth exceeds six (6) inches in height.

6.2 **Scraping.** Area shall be scraped clear, and all debris shall be removed from the required clear area.

6.3 **Mowing.** Height of vegetation shall not exceed two (2) inches at completion. Mowing shall be done each time growth exceeds six (6) inches in height. Mowing shall include hand-operated weed eaters, flail, and rotary mowers.

6.4 **Spraying.** If sprays or pre-emergent are utilized prior to growth of vegetation, preventing growth of vegetation, then this will be an acceptable method of abatement. Any time growth of vegetation exceeds six (6) inches height, it shall be removed by another acceptable method of abatement.

6.5 **Grading.** Grading shall not take place without all appropriate permits required by the County of El Dorado.

SECTION 7: **DUTY TO ABATE HAZARDOUS VEGETATION AND COMBUSTIBLE MATERIALS**

7.1 Upon receipt of a notice of violation and order to abate, as discussed in Section 13, it shall be the duty of every owner, occupant and person in control of any improved or unimproved parcel of land or interest therein, which is located in the jurisdiction of EDHCWD to abate there from, and from all parcels, roadways and parkways, except for those roads maintained by the county, all Combustible Material and Hazardous Vegetation, that in the judgment of the Fire Code Official, constitutes a Fire Hazard which may endanger or damage neighboring property pursuant to the requirements of the notice of violation and order to abate received.

7.2 The property owner, occupant and person in control of the land is responsible for the abatement and vegetation management (collectively referred to as the "Responsible Person").

7.3 The Responsible Person shall also comply with all other federal, state and local laws, including environmental protection laws, and obtain permits when necessary.

SECTION 8: **CORRECTIVE ACTIONS**

8.1 After declaring a Fire Hazard pursuant to this Ordinance, the Fire Code Official may require that the Responsible Person(s) take corrective action(s) to abate the Fire Hazard. Such actions may include, but are not limited to the following:

8.1.1 Removing Hazardous Vegetation, Combustible Material, Weeds, Rubbish, or other obstructions or materials that are a fire hazard.

8.1.2 Taking specific action(s) to come into compliance with the regulations and rules that prescribe the maintenance of defensible space around structures and real property.

SECTION 9: **INSPECTIONS BY THE EL DORADO HILLS FIRE DEPARTMENT**

9.1 For the purpose of enforcing or administering this Ordinance, the Fire Code Official, may enter upon any Unimproved Parcel for the purpose of inspecting the property or for summary abatement proceedings whenever the Fire Code Official is informed, or has reasonable cause to believe, that Hazardous Vegetation or Combustible Material exists that constitute a condition dangerous or

injurious to the health or welfare of persons or to the public, including the environment, and is a public nuisance, or is otherwise in violation of this Ordinance.

9.2 No person shall interfere with the Fire Code Official while acting in the official course and scope of their duty.

SECTION 10: **REOCCURRING FIRE HAZARD**

10.1 In the case of a parcel containing a Fire Hazard where it has been necessary for the El Dorado Hills Fire Department to Abate as a public nuisance in two consecutive years, and the Fire Hazard is seasonal or recurring, the Governing Board of EDHCWD may declare such a parcel to be a seasonal public nuisance.

10.2 As to such parcels constituting a seasonal Fire Hazard, the Fire Code Official may mail a notice to the Responsible Person(s) of the property at the address that appears upon the current assessment roll. The notice shall contain the information prescribed in Health and Safety Code Section 14900.6.

10.3 If the nuisance is not Abated by the Responsible Person(s) within the time specified, the El Dorado Hills Fire Department may proceed to Abate the property and recover costs for doing so, pursuant to Health and Safety Code sections 149001 and 14902, and as provided for in this Ordinance.

SECTION 11: **PENALTIES**

11.1 Failure to comply with the provisions described in this Ordinance may result in the issuance of an Administrative Citation by the El Dorado Hills Fire Department, or a declaration by the Board that the condition on the parcel constitute a public nuisance to be abated at the Responsible Person(s) expense.

11.2 Every violation of this Ordinance is punishable by:

11.2.1 A fine not exceeding $100.00 for the first violation; and

11.2.2 A fine not exceeding $200.00 for the second violation within three years; and

11.2.3 A fine not exceeding $500.00 for each additional violation within three years.

11.3 Payment of the fine shall not excuse the failure to correct the violation nor shall it bar further enforcement action by EDHCWD.

11.4 All fines shall be payable to EDHCWD unless otherwise directed in the Notice of Violation and Order to Correct.

11.5 For all delinquent unpaid administrative fines, there shall be a penalty imposed in accordance with the provisions of this Ordinance. The delinquency date for an administrative fine shall be 30 days

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following the imposition of the fine or the administrative determination of the Board, whichever is later.

11.6 The right to and procedures for requesting an administrative hearing are detailed in Section 13.

SECTION 12: **ABATEMENT OF NUISANCE BY FIRE CODE OFFICIAL**

12.1 Any condition caused, maintained, or permitted to exist in violation of any provisions of this Ordinance may be Abated by the Fire Code Official, pursuant to the procedures set forth in Section 13.

SECTION 13: **ABATEMENT PROCEDURES**

13.1 An Initial Notice to Abate Fire Hazard and Destroy Weeds shall be sent by U.S. Mail or other approved means to all unimproved property owners of parcels by April 15th of each year.

13.2 If the property is still deemed a Fire Hazard on or after May 1st of each year a Final Notice to Abate Fire Hazard and Destroy Weeds will be mailed to the property owner by certified U.S. Mail. In addition to the mailed notice, the property will have one or more signs conforming with the provisions of California Health and Safety Code (HSC) §§ 14891-14894 placed on them to notify the property owner of the notice to abate this concern.

13.3 The property owner will have no less than ten (10) days to abate the Fire Hazard or appeal this decision to the EDHCWD board at their May monthly meeting. If the Fire Hazard has not been abated by the end of the 10-day notice, or the end of the appeal period, whichever is greater, the EDHCWD will dispatch a weed abatement contractor to abate the Fire Hazard in accordance with the provisions of this Ordinance.

13.4 A notice of the hearing prescribed in HSC § 14892 shall be published once in a newspaper of general circulation printed and published in the county, not less than 10 days prior to the date of the hearing.

13.5 The amount of the cost for abating the Fire Hazard and the amount incurred by the Fire Department in enforcing abatement shall constitute a special assessment against the property from which removal occurs and are a lien on the property for the respective assessments as described in the current EDHCWD resolution.

SECTION 14: **REAL ESTATE TRANSACTIONS**

14.1 Prior to close of any Real Estate Transaction subject to Civil Code section 1102.19 within EDHCWD, the seller of any real property must obtain documentation from the Fire Code Official that the property is in compliance with this Ordinance and provide that documentation to the buyer at or before the close of escrow. If documentation of compliance is not available at the time of

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escrow, the buyer shall obtain documentation from the Fire Code Official stating the property is in compliance with this Ordinance within 90 days after the close of escrow, unless otherwise approved by the Fire Code Official.

SECTION 15: **CONFLICT**

15.1 The operation of this Ordinance shall in no way change or diminish the application of other ordinances of EDHCWD dealing with like or similar matters. In any case where a provision of this Ordinance is found in conflict with a provision of any zoning, building, fire safety, or health ordinance or any other section of the EDCC, including fines, the provision which establishes the higher standard for the promotion and protection of the health and safety of the people shall prevail.

15.2 It is not intended by this Ordinance to repeal, abrogate, annul, or in any way impair or interfere with existing provisions of other laws or ordinances or with private restrictions placed upon property by covenant, deed, or other private agreement except those specifically repealed by this Ordinance. In cases where two or more provisions of this or any other Ordinance conflict, the most stringent or restrictive shall prevail.

SECTION 16: **SEVERABILITY**

16.1 If any Ordinance, article, subsection or subdivision thereof, provision, sentence, clause or phrase of this code, or any application thereof, is for any reason held to be invalid by a court of competent jurisdiction, such decision shall not affect the remaining provisions of this code, which can be given effect without the invalid portions and, therefore, such invalid portions are declared to be severable.

16.2 The EDHCWD hereby declares that it would have enacted this Ordinance and each of its articles, sections, subsections, or subdivisions thereof, provisions, sentences, clauses or phrases irrespective of the fact that one or more of them is declared invalid.

SECTION 17: **EFFECTIVE DATE AND PUBLICATION**

17.1 This Ordinance shall take effect thirty (30) days after its adoption. The EDHCWD Board Secretary is directed to publish this Ordinance in a newspaper of general circulation in the District. In lieu of publication of the full text of the ordinance, a summary of the ordinance may be published by the by the Board Secretary within fifteen (15) days after its passage and a certified

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copy shall be posted in the office of the EDHCWD pursuant to *Government Code Section 36933(c) (1)*.

17.2 The above Ordinance was introduced at a meeting of the Board of Directors of the EDHCWD on {3/29/23}, and it was then read for the first time. A public hearing was set for the Ordinance to be read for the second time on { 4/25/23 } and approved by the following vote:

PASSED AND ADOPTED by the Board of Directors of the EDHCWD this, 25th day of April, 2023.

AYES: 5

NOES: 0

ABSENT: 0

ABSTAIN: 0

John Giraudo, Board President

ATTEST:

Jessica Braddock, Board Secretary

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## Appendix I: Characteristics of Fire Resistive Vegetation

All plants will burn under extreme fire weather conditions such as drought. However, plants burn at different intensities and rates of consumption. Fire-resistive plants burn at a relatively low intensity, slow rates of spread and with short flame lengths. The following are characteristics[38] of fire-resistive vegetation:

- Growth with little or no accumulation of dead vegetation (either on the ground or standing upright).
- Non-resinous plants (willow, poplar, or tulip trees).
- Low volume of total vegetation (for example, a grass area as opposed to a forest or shrub-covered land).
- Plants with high live fuel moisture (plants that contain a large amount of water in comparison to their dry weight).
- Drought-tolerant plants (deeply rooted plants with thick, heavy leaves).
- Stands without ladder fuels (plants without small, fine branches and limbs between the ground and the canopy of overtopping shrubs and trees).
- Plants requiring little maintenance (slow-growing plants that, when maintained, require little care).
- Plants with woody stems and branches that require prolonged heating to ignite.

[38] See International Code Council *Wildland Urban Interface Code Section F101; 2021.*

## Appendix J: Ready – Set – Go Wildfire Evacuation Program

The geography, weather patterns and number of Wildland Urban Interface communities in California make it a state particularly threatened by devastating wildfire. To help educate property owners and residents in areas most at risk, CAL FIRE has developed a communications program called "Ready, Set, Go!" that breaks down the actions needed to be ready for wildfire.

**Ready, Set, Go! Program**

READY, SET, GO!

Get prepared for wildfire before it strikes by following Ready, Set, Go!

- Be Ready: Create and maintain defensible space and harden your home against flying embers.
- Get Set: Prepare your family and home ahead of time for the possibility of having to evacuate.
- Be Ready to GO!: Take the evacuation steps necessary to give your family and home the best chance of surviving a wildfire.

Go to this link for additional information on the Ready - Set - Go program: What is the Ready, Set, Go! Program? (wildlandfirersg.org).

## Appendix K: FIREWISE USA®

The National Fire Protection Association (NFPA) Firewise USA® recognition program provides a collaborative framework to help neighbors in a geographic area get organized, find direction, and take action to increase the ignition resistance of their homes and community and to reduce wildfire risks at the local level. Any community that meets a set of voluntary criteria on an annual basis and retains an "In Good Standing Status" may identify itself as being a Firewise® Site.

The Firewise USA® program is administered by NFPA® and is co-sponsored by the USDA Forest Service and the National Association of State Foresters. While the NFPA® administers this program, individuals and communities participate on a voluntary basis. The NFPA® disclaims liability for any personal injury, property, or other damages of any nature whatsoever, whether special, indirect, consequential, or compensatory, directly, or indirectly resulting from participation in the Firewise USA® program. The NFPA® also makes no guaranty or warranty as to the accuracy or completeness of program guidance.

Go to this link for additional information on the FIREWISE USA program: NFPA - Firewise USA®.

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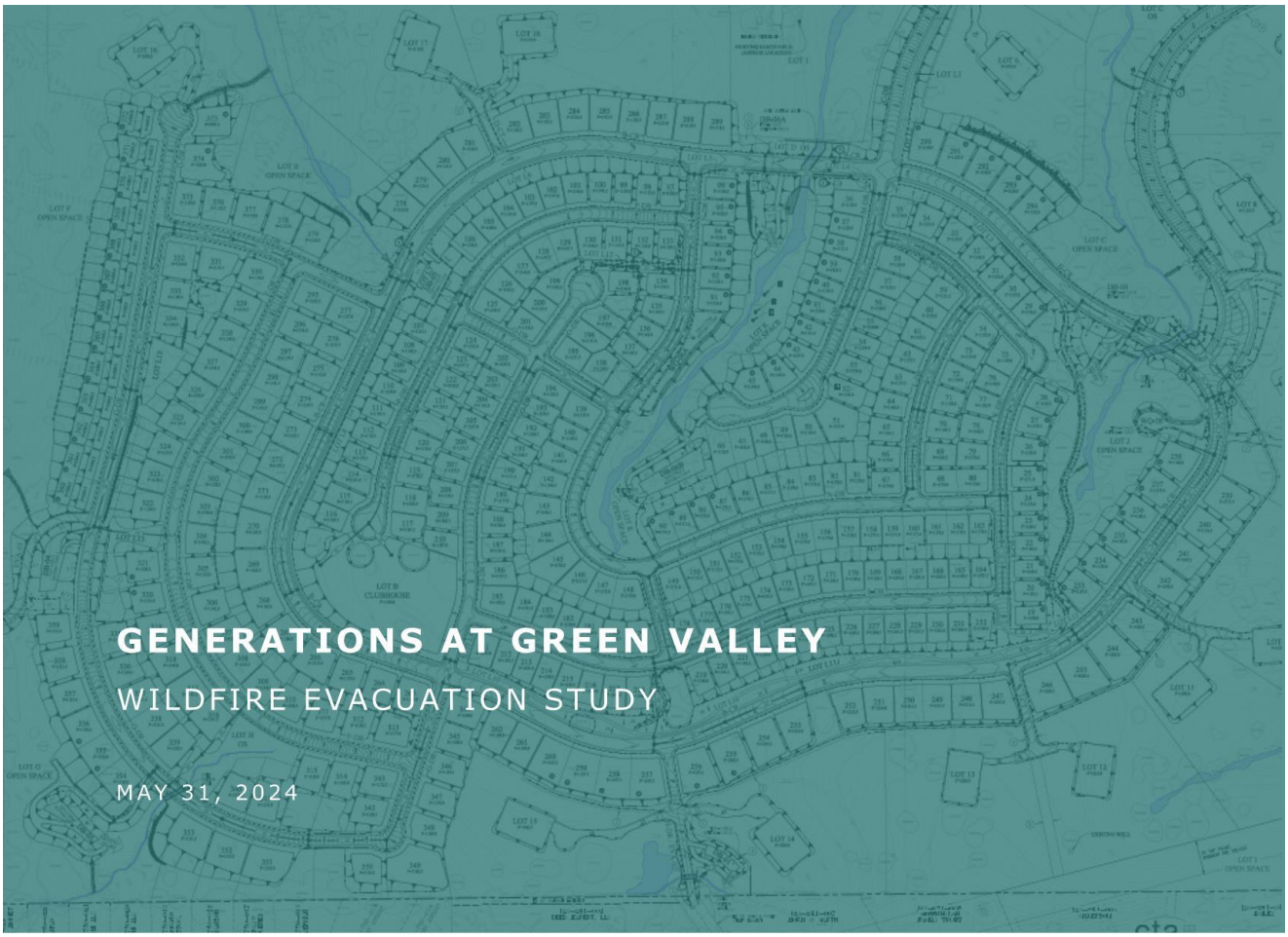
# Appendix L: Generations at Green Valley Wildfire Evacuation Study

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## INTRODUCTION

This study documents the wildfire evacuation assessment for the proposed Generations at Green Valley residential subdivision development located in El Dorado County, California. This assessment has been completed per the direction of local agencies, including CAL FIRE, El Dorado Hills Fire Department, El Dorado County Sheriff's Office of Emergency Services, and El Dorado County Planning Services. This study serves as a supporting analysis of the Generations at Green Valley WUI Fire Protection Plan (EDC Project #TM22-0001). The objective of this study is to identify evacuation routes for the proposed development and determine if there are significant impacts on the ability to safely evacuate the proposed development and/or if the proposed development has a significant impact on the ability of the surrounding community to concurrently evacuate during a larger area wildfire evacuation scenario. Significant impacts are determined through an assessment of Evacuation Time Estimates (ETEs) to clear evacuation trips from the evacuation zones and if vehicle evacuation traffic is impeded from exiting the evacuation zones at the end of the wildfire scenario period. At the time of this study, there are no local or state agency thresholds of significance based on ETEs. The ETEs are determined using a simulation-based model that accounts for the roadway capacity and the time-dynamics of a wildfire evacuation event.

The methodology for the wildfire evacuation route assessment used for this study is consistent with Government Code Section 65302.15 (California AB 747), which requires cities and counties to identify evacuation routes and locations "under a range of emergency scenarios." The capacity, safety, and viability of evacuation routes associated with the project must be analyzed against the range of emergency scenarios to ensure that it does not impair the implementation of an adopted emergency response plan or evacuation plan. The traffic modeling approach used by this study assesses the capacity of the roadway system under multiple evacuation departure times and available evacuation route scenarios. The Project site is not subject to substantial hazards other than wildfire. Compliance with federal, state, county, and local regulations will minimize risks associated with seismic events, flooding, geological conditions, and hazardous materials. This evacuation study does not plan for compounding disasters (e.g. simultaneous wildfire and hazardous materials incidents) or cascading effects (e.g. communications disruption during a wildfire).

## DISCLAIMER

The contents of this study are founded on precise data and a likely wildfire scenario within the El Dorado Hills area as provided by Phillips Consulting Services developed in coordination with local fire agencies. They are not intended as a forecast or comprehensive compilation of all conceivable wildfire situations in the area. This study does not ensure that wildfires or evacuation routes will unfold precisely as depicted in this study nor does it identify any evacuation routes to be taken by the public. Evacuation orders and evacuation route designation are the purview and responsibility of the El Dorado County Sheriff's Office of Emergency Services. This study only accounts for the evacuation demand, departure times, destination distribution, and background traffic condition assumptions described in this report. A wildfire scenario that results in changes to any of these input parameters may result in different outcomes.

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## DESCRIPTION OF DEVELOPMENT

The proposed Generations development is located in the east of Folsom Lake State Recreation Area on Green Valley Road. The project proposes to add 379 residential units including 214 age-restricted units, 148 units of 10K single-family lots, and 17 units of 5 AC lots **FIGURE 1** and **FIGURE 2** show the study area and site plan.

The evacuation area is around 3 miles north of US 50. The major west/east facility adjacent to the development is Green Valley Road. The proposed Generations development includes two access points on Green Valley Road. In addition to the two access points to Green Valley Road, an Emergency Access/Egress (EAE) will be provided via Lima Way to serve as a secondary means of emergency access and evacuation. The connection would have an automatic gate and be designed to be accessible by project residents during an evacuation order. Additionally, there would be two Emergency Vehicle Access (EVA) road connections at Marden Drive and East Green Springs Road. The East Green Springs Road connection will be stubbed to the Green Springs Ranch Property line. The EVA would only connect to Green Springs Ranch if the Green Springs Ranch Association chooses to complete the extension in the future and at its discretion. Connection locations are shown in **FIGURE 2**. These accesses would meet design standards for gated developments as described in Section 130.30.090(D) of the El Dorado County Code of Ordinances and the El Dorado Hills Fire Department Ordinance 2022-01. The gates would also comply with all design and operation criteria included in Section D103.5 of El Dorado Hills Fire Department Ordinance 2022-01.

The east primary access on Green Valley Road is a proposed traffic signal with an eastbound right turn deceleration turn lane, a westbound left turn lane, and a two-lane exit with left and right turn lanes. The secondary west access along Green Valley Road includes single-lane right-in, right-out only turn access. Within the Generations subdivision, all streets are location streets with an approximate width of 32 feet that include segments of on-street parking. Posted speeds are anticipated to be 25 mph, but with the moderate curvature, grades, and configurations of intersections, the operational speeds for purposes of this analysis are assumed to be 20 mph or less. The evacuation routes for the Generations site are shown in **FIGURE 3**.

## WILDFIRE SCENARIO

The wildfire scenario for purposes of this evacuation assessment was provided to DKS Associates by Phillips Consulting Services developed in coordination with local fire agencies. The fire scenario originates north of the study area in the general vicinity of Hickok Road, burning south toward the Generations development site as shown in Figure 1. The fire is assumed to occur on a Saturday at 2:00 PM in October. This period was chosen as more residents are generally at home during weekends that would result in a potentially greater number of trips to be evacuated. In addition, area traffic counts show that background traffic activity is higher on mid-day Saturday as compared to Sunday, representing additional demand on local roadways at the start of an evacuation. This wildfire scenario will be evaluated considering a fast and slower rate of spread as detailed in the following Evacuation Time section. Based on the fire origin, season, time of day, and direction of spread parameters, the El Dorado County Sheriff's Office of Emergency Services determined the boundaries of the evacuation zone and warning zones to be evaluated for this evacuation assessment.

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The project team also coordinated with the Office of Emergency Services to define the evacuation periods of 45 minutes and 60 minutes to represent the time period in which all evacuation trips would need to depart under a fast and moderate spreading fire scenario.

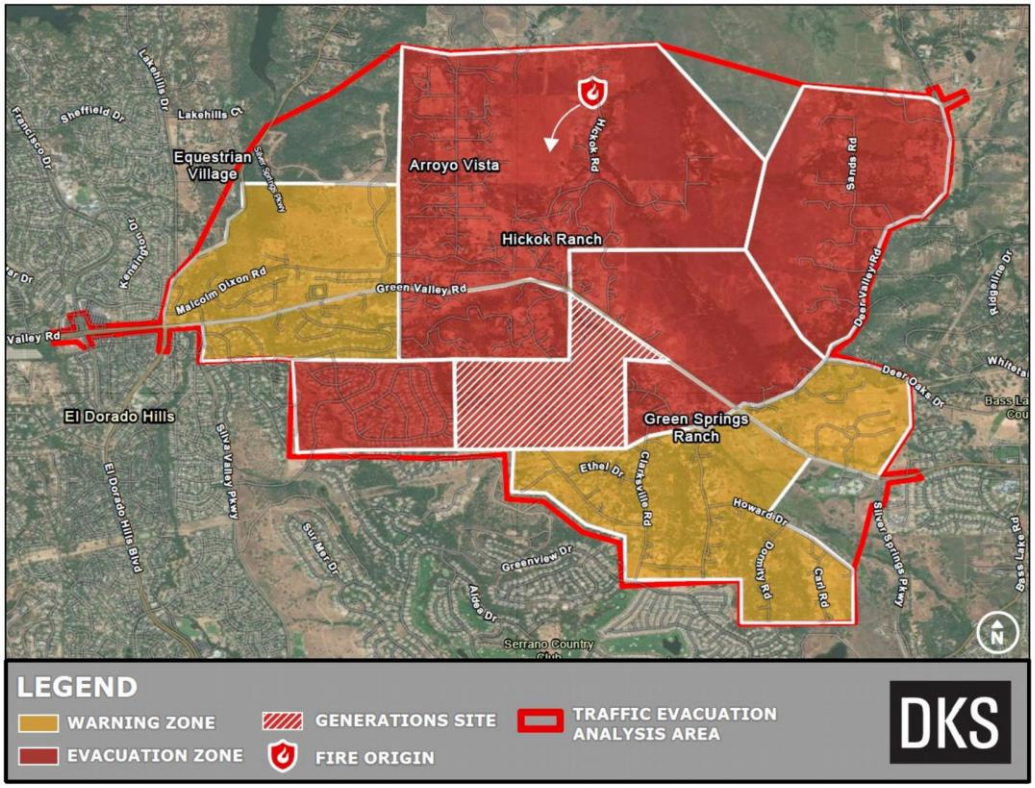


FIGURE 1: STUDY AREA

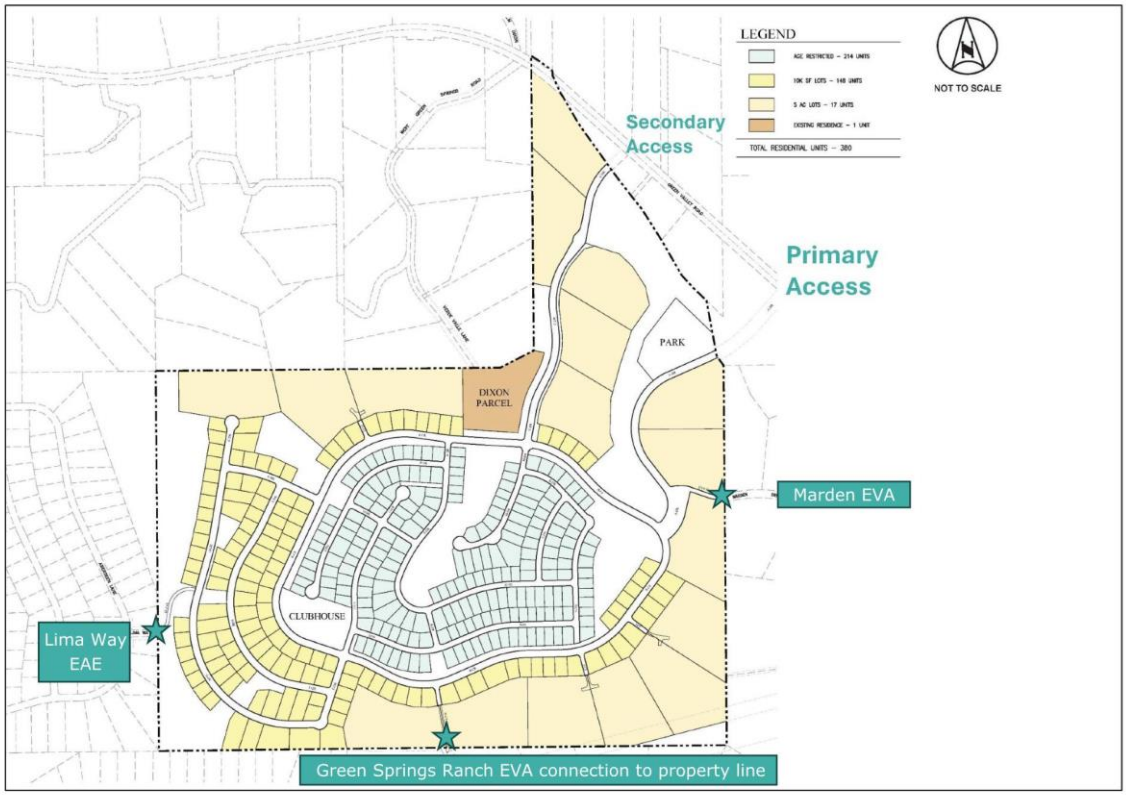


**FIGURE 2: GENERATIONS DEVELOPMENT SITE PLAN**

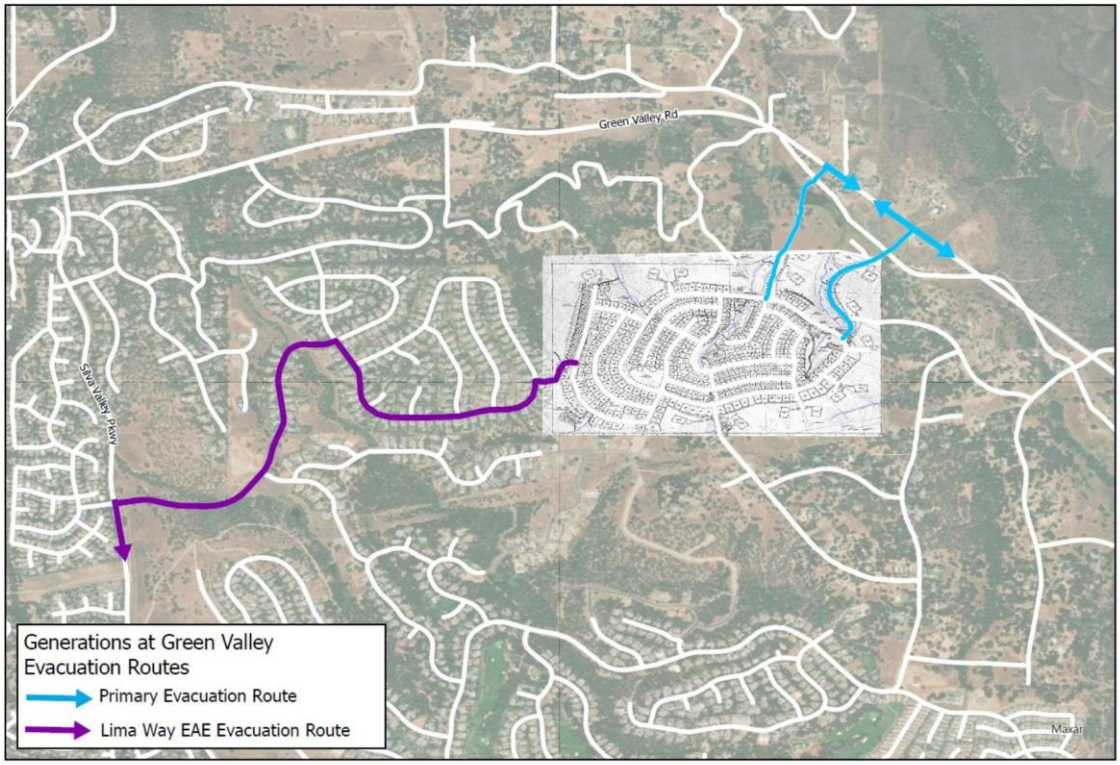


FIGURE 3: GENERATIONS AT GREEN VALLEY PUBLIC EVACUATION ROUTES

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# OVERVIEW OF EVACUATION

## EVACUATION AND WARNING ZONES

The evacuation and warning zones are defined in Figure 4 as red and yellow areas. Evacuation zones define the area of mandatory evacuation for all individuals through the issue of an Evacuation Order. Warning zones are areas near the evacuation zones that are provided alert notification that a potential wildfire incident may require people to leave the area. It is issued as a precautionary measure to provide sufficient time for people to prepare themselves for a potential evacuation. Warning zones typically generate voluntary evacuation trips that add to the warning zone evacuation demand as detailed under the Evacuation Trip Demand Section.

## EVACUATION DESTINATIONS

All evacuation trips are assigned evacuation destination directions along key routes leaving the study area to represent ultimate evacuation destinations downstream, such as shelters and neighboring towns. The following destinations have been identified for the Generations evacuation model:

- A: Green Valley Road east of Francisco Drive
- B: El Dorado Hills Boulevard south of Green Valley Road
- C: Silva Valley Parkway south of Green Valley Road
- D: Green Valley Road east of Silver Springs Parkway
- E: Silver Springs Parkway south of Green Valley Road
- F: Deer Valley Road east of Kanaka Valley Road

Each evacuation and warning zone has an assigned trip distribution percentage to one or more of the above destinations as shown in Figure 4. Evacuation Routes for the Generations site are shown in Figure 3.

## EVACUATION MODEL SOFTWARE

The Evacuation assessment uses a Dynamic Traffic Assignment (DTA) simulation model using PTV VISUM software to capture all elements of a wildfire evacuation. The roadway network in the model includes all streets within the study area with key attributes, including the number of lanes, posted speed limits, intersection control (including stop signs, signal timing, and yield signs), and facility capacity. The evacuation and background trips are then assigned to the network in 5-minute intervals over the assignment period. The assignment period includes a one-hour warm-up period to preload background traffic, a 45-minute or 60-minute evacuation period following the evacuation order, and a one-hour cool-down period to capture the time to clear any remaining traffic. The evacuation destinations are defined in the following section.

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## EVACUATION TRIP DEMAND

The evacuation demand is determined by residential household data in evacuation and warning zones. US Census data on households without vehicles, those with one vehicle, and those with multiple vehicles is used to estimate demand. Households with no vehicle access generate zero evacuation trips as those households are anticipated to evacuate with neighbors or emergency personnel. Households with 1 vehicle generate one trip per household. For all other households, the value of 1.75 vehicles evacuating per household will be used, with the exception of the 55-year-old plus (55+) properties within the Generations development, where a value of 1.5 vehicles evacuating per household will be used. 214 of the 379 development parcels are proposed to be 55+ properties that are anticipated to have a lower resident per household and lower vehicle ownership rate than the non-55+ parcels, hence the lower number of vehicles evacuating per household. The value of 1.75 is consistent with the Santa Rosa Post-Fire Survey and the value of 1.5 is more conservative than the 2022 City of Sammamish Evacuation Survey value of 1.41 vehicles per non-55+ household.

Population within the warning zones may also voluntarily evacuate during the evacuation order, further adding to background traffic and congestion. 25 percent of the household trips are assumed to voluntarily evacuate during the evacuation order.

Given the primarily residential land use of the study area and the weekend time period of the wildfire scenario, worker or other evacuation trip types are not considered for this assessment. Additionally, once an Evacuation Order is given, return trips are not permitted into the evacuation zones, so egress-only trips are assumed for the evacuation trip demand. To be conservative, the evacuation trip estimation assumes no shelter in place trip reduction.

## EVACUATION TIME

The departure time distribution of evacuees is critical to the evacuation assessment as that determines the peaking characteristics and subsequent congestion levels during an evacuation event. This time includes the time it takes for evacuees to receive the order, gather belongings, and perform any other necessary duties before departing their household. The evacuation assessment of the Generations development includes two departure time scenarios that could coincide with moderate or fast spreading wildfire scenarios:

1. 60 Minute Evacuation: All evacuation trips depart the evacuation zone or warning zone within 60 minutes of the evacuation order.
2. 45 Minute Evacuation: All evacuation trips depart the evacuation zone or warning zone within 45 minutes of the evacuation order.

The evacuation trip departure time distribution is assigned to the model in 5-minute intervals, with a percentage of the evacuation trips beginning to evacuate with each interval. The following departure time distributions were informed by the 2024 Greater Placerville Wildfire Evacuation Preparedness Study that developed distributions with input from El Dorado County Fire, CalFire, and El Dorado County Sheriff's OES. The departure time distributions for this study were adapted to use 5-minute intervals, rather than 15-minute to account for the shorter overall evacuation periods for these wildfire scenarios.

Table 1 shows the departure for the 60-minute and 45-minute scenarios.

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**TABLE 1: 60-MINUTE: PERCENT OF EVACUATION TRIPS BEGINNING AFTER EVACUATION ORDER**

| ELAPSED TIME (MIN) | 60-MINUTE SCENARIO | 30-MINUTE SCENARIO |
|---|---|---|
| 05 | 5% | 5% |
| 10 | 10% | 15% |
| 15 | 18% | 25% |
| 20 | 26% | 40% |
| 25 | 34% | 60% |
| 30 | 42% | 75% |
| 35 | 58% | 85% |
| 40 | 74% | 95% |
| 45 | 84% | 100% |
| 50 | 94% | |
| 55 | 97% | |
| 60 | 100% | |

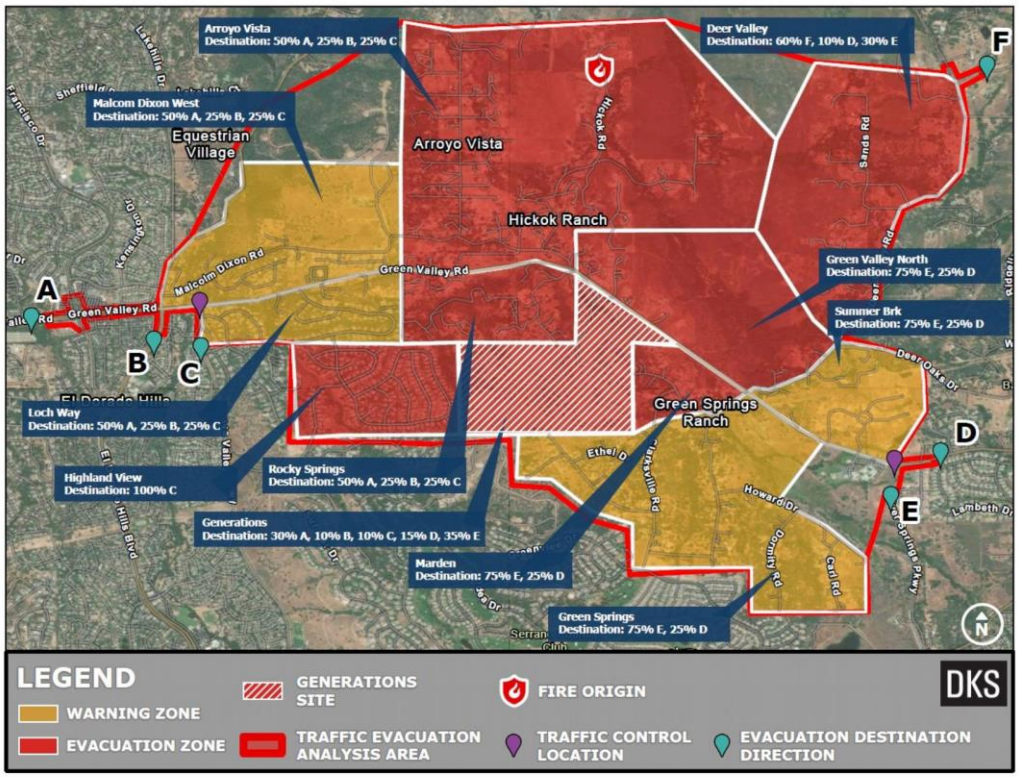


FIGURE 4: GENERATIONS WILDFIRE EVACUATION SCENARIO PARAMETERS

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## TRAFFIC CONTROL AND BACKGROUND TRAFFIC ASSUMPTIONS

Given the fast-moving fire scenarios with either a 45- or 60-minute evacuation period, traffic control measures are assumed to be in place by emergency responders following an initial response lag time to assist in the evacuation process by restricting background traffic from entering the evacuation area. These traffic control locations are shown with the purple pins in **FIGURE 4**.

1. East Traffic Control Point: Westbound Green Valley Road is closed to all traffic except emergency response and livestock evacuation support vehicles.
2. West Traffic Control Point: Eastbound Green Valley Road is closed to all traffic except emergency response and livestock evacuation support vehicles.

It is assumed that these two traffic control closures for background traffic are in place 20 minutes after the start of the Evacuation Order. No additional traffic control measures are assumed in the evacuation model assumptions.

Replica data was used to estimate weekend afternoon background traffic that will be present at the time of the evacuation along Green Valley Road, Francisco Drive, El Dorado Hills Boulevard, Silva Valley Parkway, and Silver Springs Parkway. Replica uses mobile device data to provide complete trip tables for all modes of travel representing typical weekday and weekend days in the modeled season for resident, worker, visitor, and commercial travel and defines trip characteristics and routing information.

## TRANSPORTATION NETWORK

The evacuation model will include a full transportation network inside the warning zones, evacuation zones, and critical junctions to the evacuation destinations as shown in Figure 4. The network includes all street and junction controls, including stop signs, yield signs, traffic signals, and any emergency traffic control elements.

During a wildfire evacuation there are many factors that can influence the capacity of the system that may result in the evacuation traffic not flowing at the same rate as under ideal non-emergency conditions. These factors may include heavy smoke conditions that limit visibility, the presence of emergency response vehicles, and non-typical driver behaviors because of the emergency conditions. To capture these effects, all the model scenarios were analyzed with reduced roadway capacity by approximately 40 percent to capture the worst case of traffic efficiency during a wildfire. This 40 percent reduction in capacity was selected based on the professional judgment of the consultant team. This capacity reduction contributes to congestion patterns that influences both the evacuation route assignment and the evacuation time estimates.

## EMERGENCY ACCESS EGRESS ROUTES

In addition to the two primary access/egress connections to Green Valley Road from Generations, there is an Emergency Access/Egress (EAE) Route via Lima Way through the Highland View neighborhood. At the request of local agencies, this analysis considers the evacuation of Generations with just the primary access locations and with both the primary access and EAE at Lima Way open.

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All scenarios are evaluated under both 45 and 60 minute evacuation periods. Under the EAE scenarios, 30% of the total Generations evacuation demand is assumed to use the EAE to Aberdeen Lane and Appian Way via Lima Way to access southbound Silva Valley Parkway. During this scenario, 100% of the Highland View evacuation zone is also evacuating concurrently via Appian Way. The Lima Way EAE will be designed to allow one-way emergency public evacuation access via an automated gate. This EAE connection also provides emergency evacuation access egress from the Highland View neighborhood through the Generations development with manual intervention by emergency services, thereby providing an additional evacuation route to benefit the Highland View and surrounding neighborhoods.

## WILDFIRE EVACUATION ASSESSMENT

This evacuation assessment detailed for each of the following six scenarios:

1. 60-minute Evacuation without Generations Construction
2. 60-minute Evacuation with Generations Construction and no Lima Way access
3. 60-minute Evacuation with Lima Way EAE
4. 45-minute Evacuation without Generations Construction
5. 45-minute Evacuation with Generations Construction and no Lima Way access
6. 45-minute Evacuation with Lima Way EAE

For each scenario, Evacuation Time Estimates (ETEs) are presented by the accumulated percentage of evacuated trips by time intervals showing the progression of evacuation trips throughout the evacuation period. The ETEs are presented both for evacuation of the Generations zone, the evacuation of Highland View, and the other evacuation zones. Note it is not possible to have 100% of the evacuation trips clear the evacuation zone by the end of the evacuation period as vehicles are modeled leaving within the 40-to-45-minute period and the 55-to-60-minute period after the start of the Evacuation Order and trip lengths often exceed 5 minutes to clear the zone, even without congestion.

As evacuation route congestion can occur downstream of the evacuation zones, average and maximum travel times are also evaluated from the evacuation zones to the study area destination directions to estimate the time it takes to clear the evacuation vicinity.

In addition, key traffic congestion bottleneck locations are identified by extent and time relative to the evacuation period. Three primary bottleneck locations are described for each scenario:

- Westbound Green Valley Road from Silva Valley Parkway traffic signal
- Eastbound Green Valley Road from Silver Springs Parkway traffic signal
- Northbound Generation Primary Access to Green Valley Road traffic signal

The bottleneck locations and summaries of the ETEs are detailed under a key observations section for each scenario.

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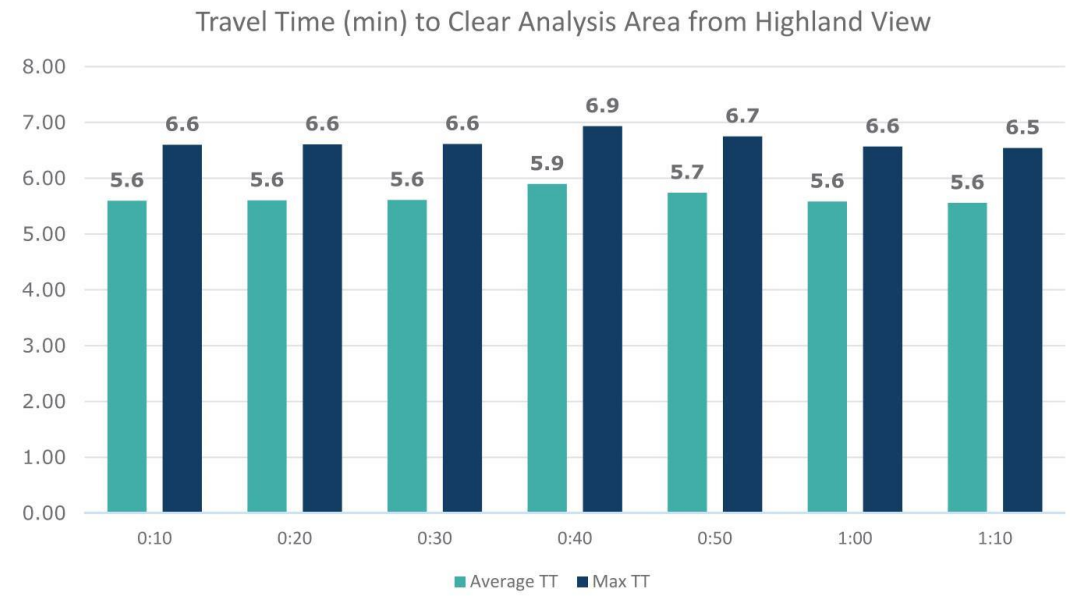
## 60-MINUTE SCENARIO – WITHOUT GENERATIONS CONSTRUCTION



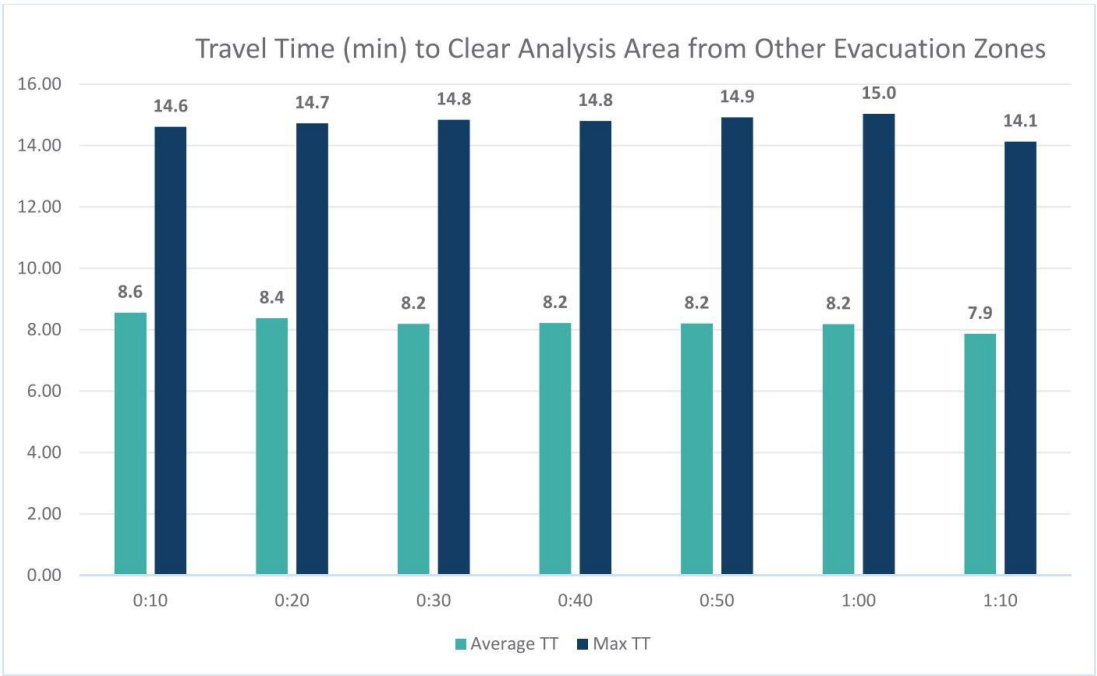




**FIGURE 5: 60-MINUTE SCENARIO TRAVEL TIME**

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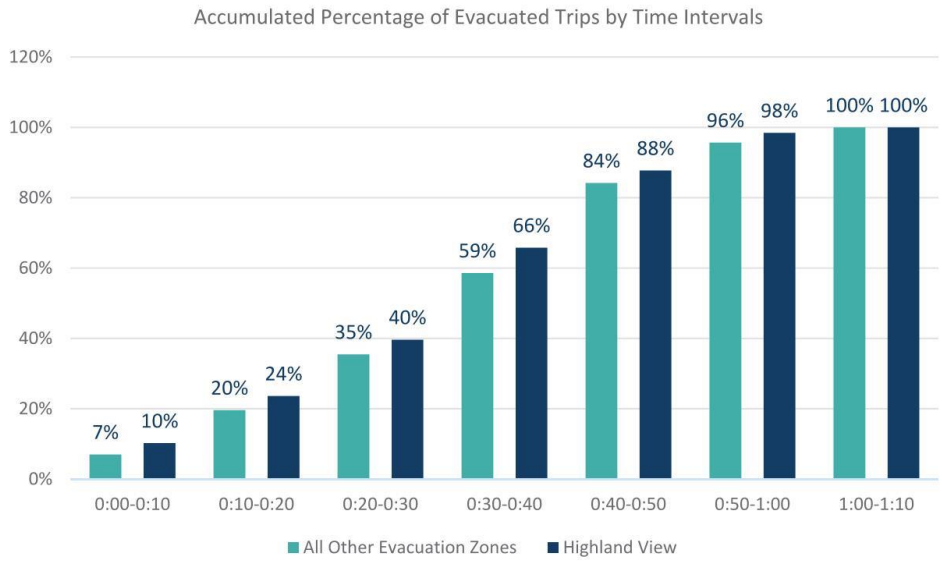


**FIGURE 6: 60-MINUTE SCENARIO: ACCUMULATED PERCENTAGE OF EVACUATED TRIPS BY TIME INTERVALS**

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**Key Observations: 60-Minute Without Generations Construction**

- Arroyo Vista evacuation trips evacuate west using Malcom Dixon Road directly to Green Valley Road using the Malcom Dixon Cutoff or continue west to Salmon Falls Road. Other evacuation and warning zones access Green Valley Road or Deer Valley Road directly using local streets based on the destination directions described above on Figure 4.
- The peak evacuation trip demand occurs between 40 and 50 minutes after the start of the Evacuation Order.
- During the peak evacuation time interval, it takes an average of 5.9 minutes and a maximum of 6.9 minutes to clear the analysis area departing from Highland View.
- During the peak evacuation time interval, an average of 8.2 minutes and a maximum of 14.9 minutes to clear all other evacuation zones.
- 40 minutes after the start of the Evacuation Order, 66% of Highland View has evacuated the analysis area and 59% of all other evacuation trips have evacuated the same area.
- 60 minutes after the start of the Evacuation Order, 98% of Highland View has evacuated the analysis area and 96% of all other evacuation trips have evacuated the same area.
- 70 minutes after the start of the Evacuation Order 100% of all trips have cleared the evacuation zone.
- The westbound evacuation queue on Green Valley Road from the Silva Valley Parkway traffic signal is the longest at approximately 0.1 miles 10 minutes after the Evacuation Order (The evacuation zone boundary is 0.9 miles from the traffic signal)
- The eastbound evacuation queue on Green Valley Road from the Silver Springs Parkway traffic signal is minimal throughout the Evacuation Order (The evacuation zone boundary is 0.75 miles from the traffic signal)
- All downstream traffic congestion bottlenecks do not extend into the evacuation zone and do not impede evacuation within the evacuation zone.

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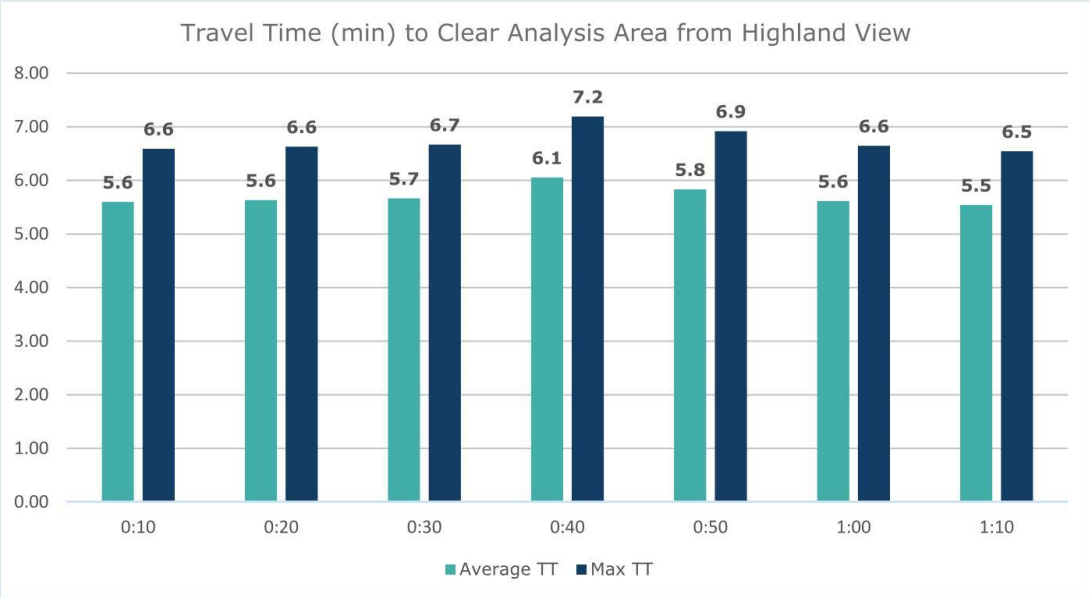
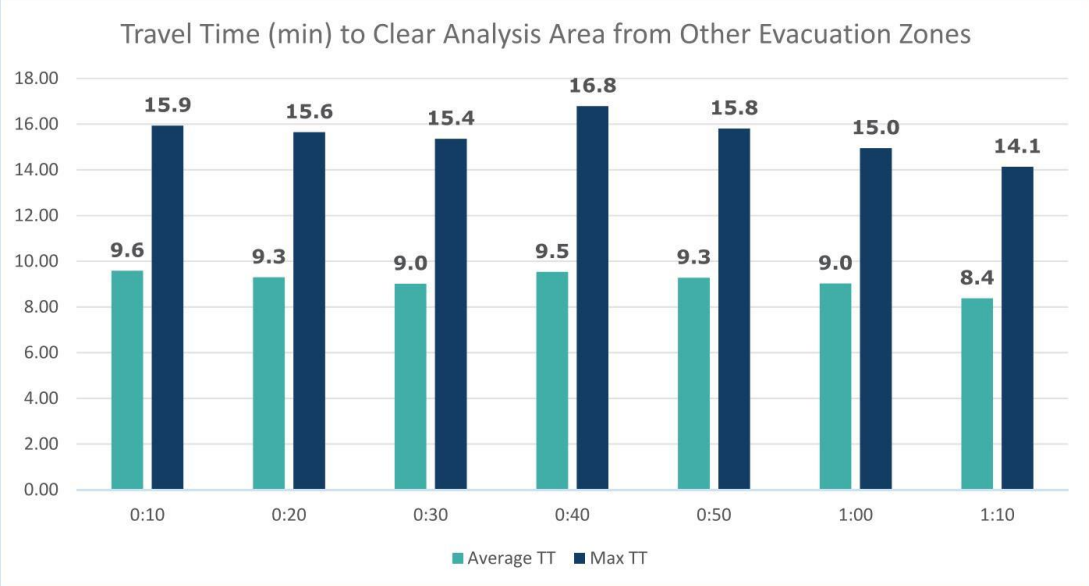
## 60-MINUTE SCENARIO – WITH GENERATIONS DEVELOPMENT



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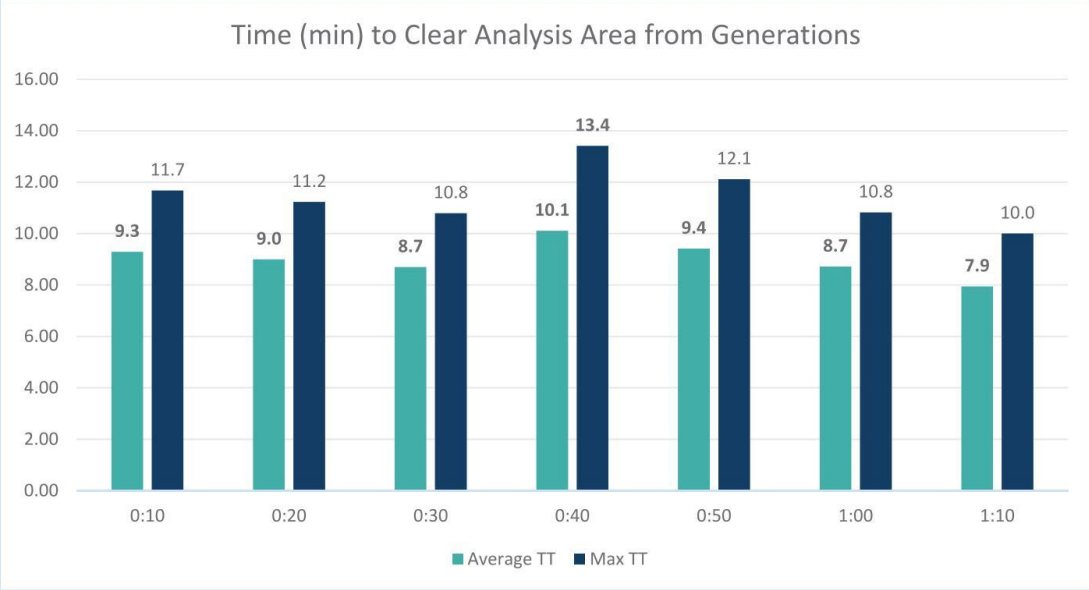


**FIGURE 7: 60-MINUTE WITH GENERATIONS CONSTRUCTION SCENARIO TRAVEL TIMES**

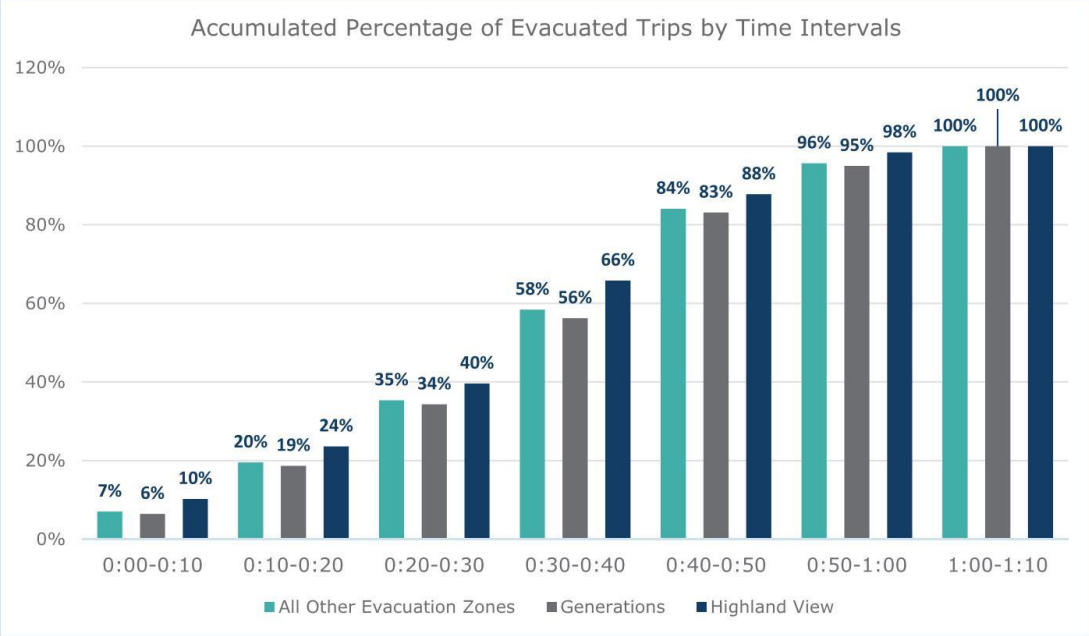


**FIGURE 8: 60-MINUTE SCENARIO WITH GENERATIONS CONSTRUCTION: ACCUMULATED PERCENTAGE OF EVACUATED TRIPS BY TIME INTERVALS**

**Key Observations: 60-Minute – Generations Build Scenario**

- Arroyo Vista evacuation trips evacuate west using Malcom Dixon Road directly to Green Valley Road using the Malcom Dixon Cutoff or continue west to Salmon Falls Road. Other evacuation and warning zones access Green Valley Road or Deer Valley Road directly using local streets based on the destination directions described above in the memo.
- The peak evacuation trip demand occurs between 40 and 50 minutes after the start of the Evacuation Order.
- During the peak evacuation time interval, it takes an average of 6.1 minutes and a maximum of 7.2 minutes to clear the analysis area departing from Highland View.
- During the peak evacuation time interval, it takes an average of 9.5 minutes and a maximum of 17 minutes to clear the analysis area from all other evacuation zones.
- These parameters for Highland View are relatively unchanged for the same period between the Build and No Build Scenario. For all other evacuation zones, both the average travel time and maximum travel time increases by around a minute.
- 40 minutes after the start of the Evacuation Order, 56% of the Generations development has evacuated the analysis area, 66% of Highland View, and 58% of all other evacuation trips have also evacuated the area.
- 60 minutes after the start of the Evacuation Order, 95% of the Generations development has evacuated the analysis area, 98% of Highland View, and 96% of all other evacuation trips have evacuated the area.
- 70 minutes after the start of the Evacuation Order 100% of all trips have cleared the evacuation zone, including the Generations zone.
- The construction of the Generations community has minimal impact on the ability of the surrounding area to evacuate within this evacuation scenario.
- The westbound evacuation queue on Green Valley Road from the Silva Valley Parkway traffic signal extends approximately 0.3 miles at 50 minutes after the Evacuation Order (The evacuation zone boundary is 0.9 miles from the traffic signal)
- The eastbound evacuation queue on Green Valley Road from the Silver Springs Parkway traffic signal is minimal throughout the evacuation.
- The southbound evacuation queue exiting the Generations Primary Access from the Green Valley Road traffic signal extends approximately 0.1 miles 20 minutes after the Evacuation Order
- All downstream traffic congestion bottlenecks do not extend into the evacuation zone and do not impede evacuation within the evacuation zone.

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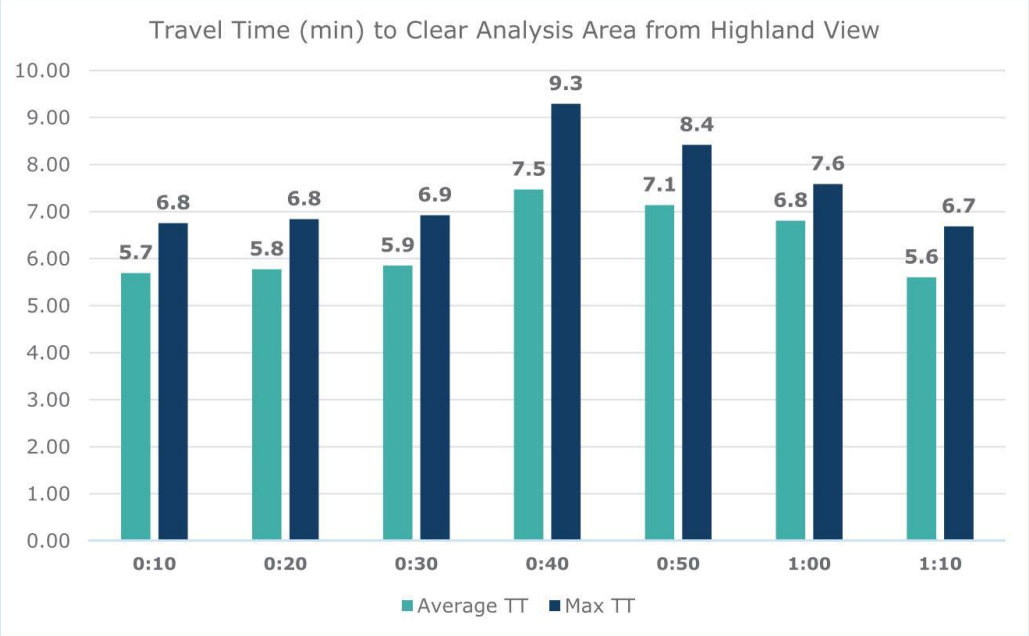
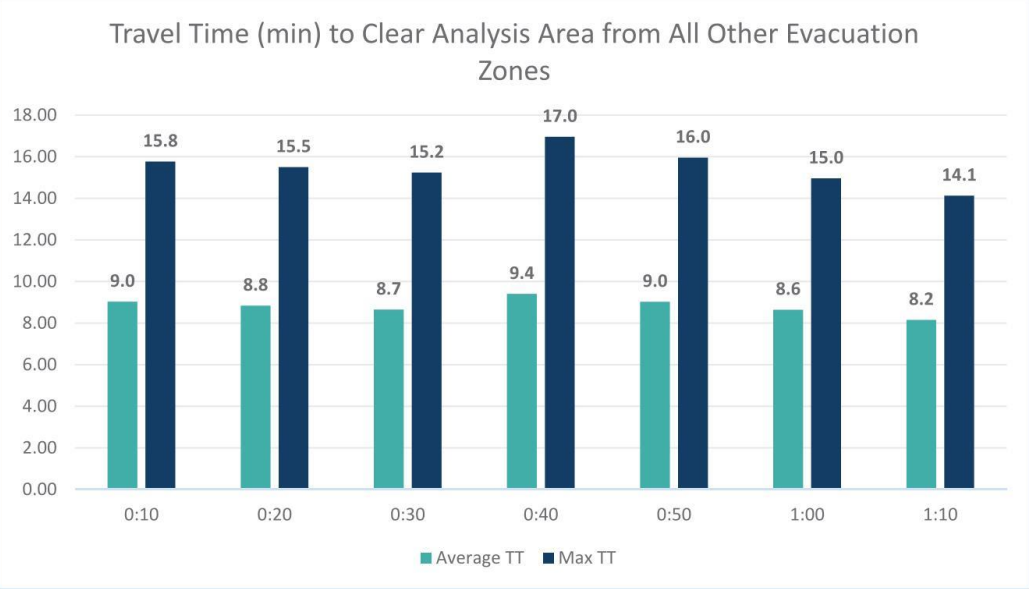
## 60-MINUTE SCENARIO – WITH LIMA WAY ACCESS



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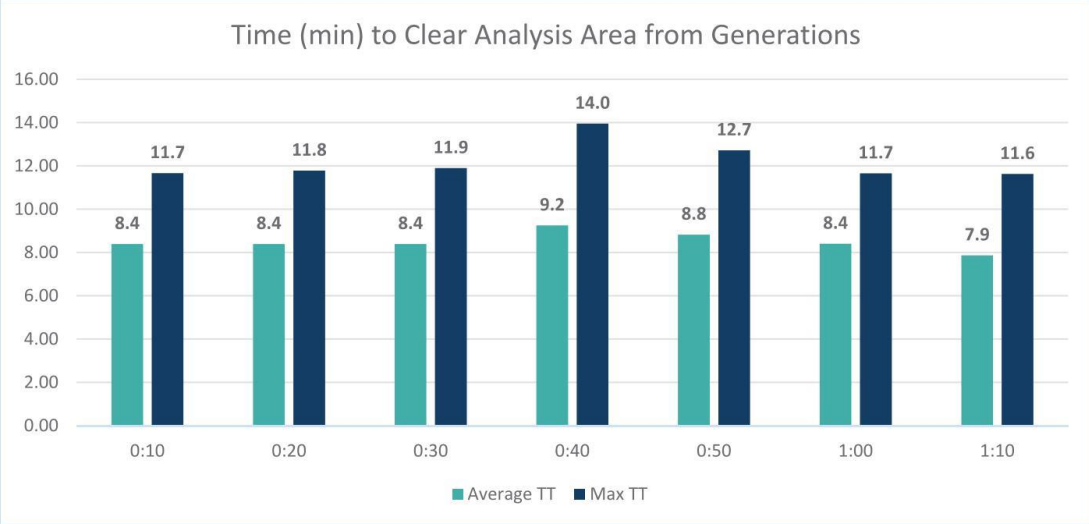


**FIGURE 9: 60-MINUTE LIMA WAY ACCESS SCENARIO TRAVEL TIME**

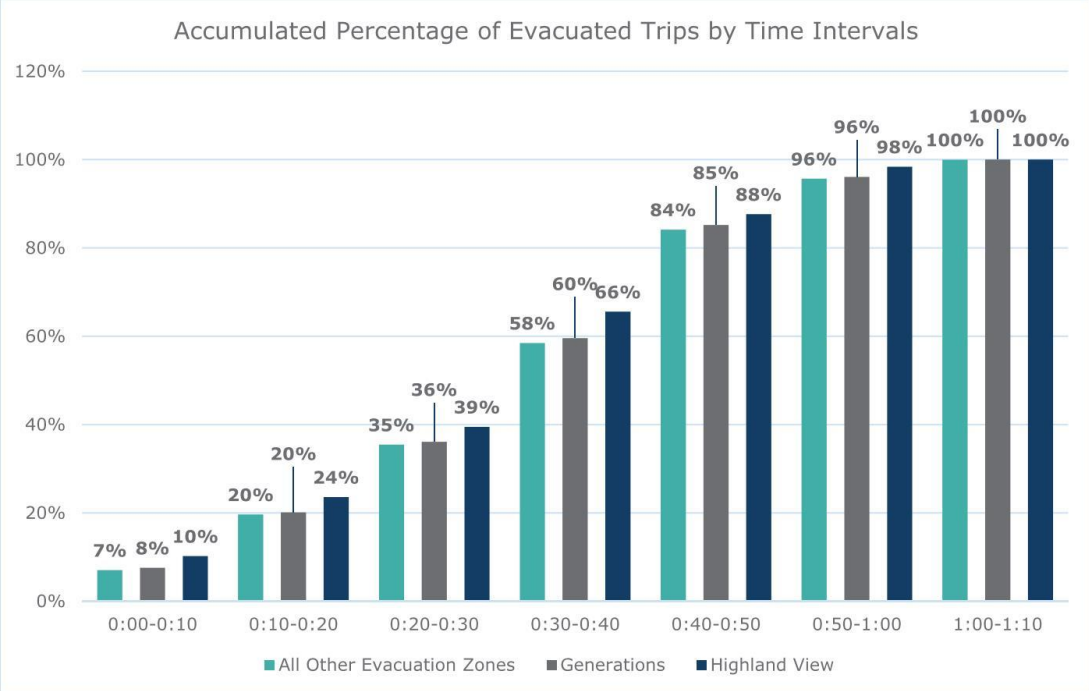


**FIGURE 10: 60-MINUTE SCENARIO WITH LIMA WAY ACCESS ACCUMULATED PERCENTAGE OF EVACUATED TRIPS BY TIME INTERVALS**

**Key Observations: 60-Minute – Lima Way Access Scenario**

- Arroyo Vista evacuation trips evacuate west using Malcom Dixon Road directly to Green Valley Road using the Malcom Dixon Cutoff or continue west to Salmon Falls Road. Other evacuation and warning zones access Green Valley Road or Deer Valley Road directly using local streets based on the destination directions described above in the memo.
- The peak evacuation trip demand occurs between 40 and 50 minutes after the start of the Evacuation Order.
- During the peak evacuation time interval, it takes an average of 9.2 minutes and a maximum of 14 minutes to clear the evacuation zone departing from the Generations development area.
- During the peak evacuation time interval, it takes an average of 7.5 minutes and a maximum of 9.3 minutes to clear the evacuation zone from Highland View and an average of 9.4 minutes and a maximum of 17 minutes to clear all other evacuation zones.
- 40 minutes after the start of the Evacuation Order, 60% of the Generations development has evacuated the analysis area, 66% of Highland View, and 58% of all other evacuation trips have also evacuated the area.
- 60 minutes after the start of the Evacuation Order, 96% of the Generations development has evacuated the analysis area, 98% of Highland View, and 96% of all other evacuation trips have evacuated the area.
- 70 minutes after the start of the Evacuation Order 100% of all trips have cleared the evacuation zone, including the Generations zone.
- The construction of the Generations community and its ability to access Lima Way for evacuation purposes has minimal impact on the ability of the surrounding area to evacuate within this evacuation scenario.
- The westbound evacuation queue on Green Valley Road from the Silva Valley Parkway traffic signal extends approximately 0.2 miles at 50 minutes after the Evacuation Order (The evacuation zone boundary is 0.9 miles from the traffic signal)
- The eastbound evacuation queue on Green Valley Road from the Silver Springs Parkway traffic signal is minimal throughout the evacuation.
- The northbound evacuation queue exiting the Generations Primary Access from the Green Valley Road traffic signal extends approximately 0.1 miles 20 minutes after the Evacuation Order
- All downstream traffic congestion bottlenecks do not extend into the evacuation zone and do not impede evacuation within the evacuation zone.

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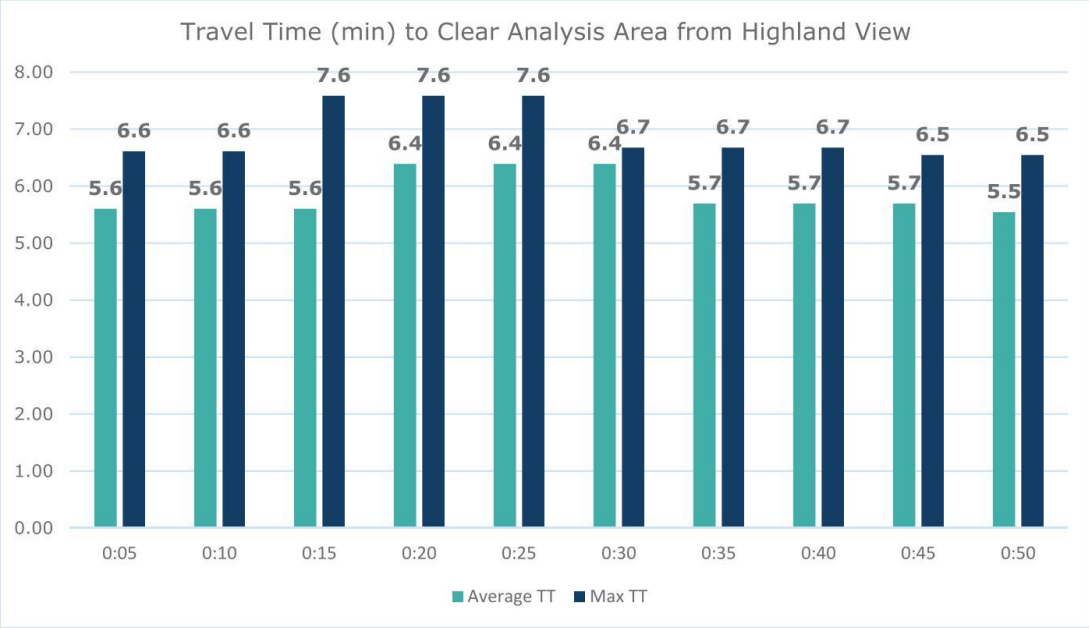
## 45-MINUTE SCENARIO – WITHOUT GENERATIONS DEVELOPMENT



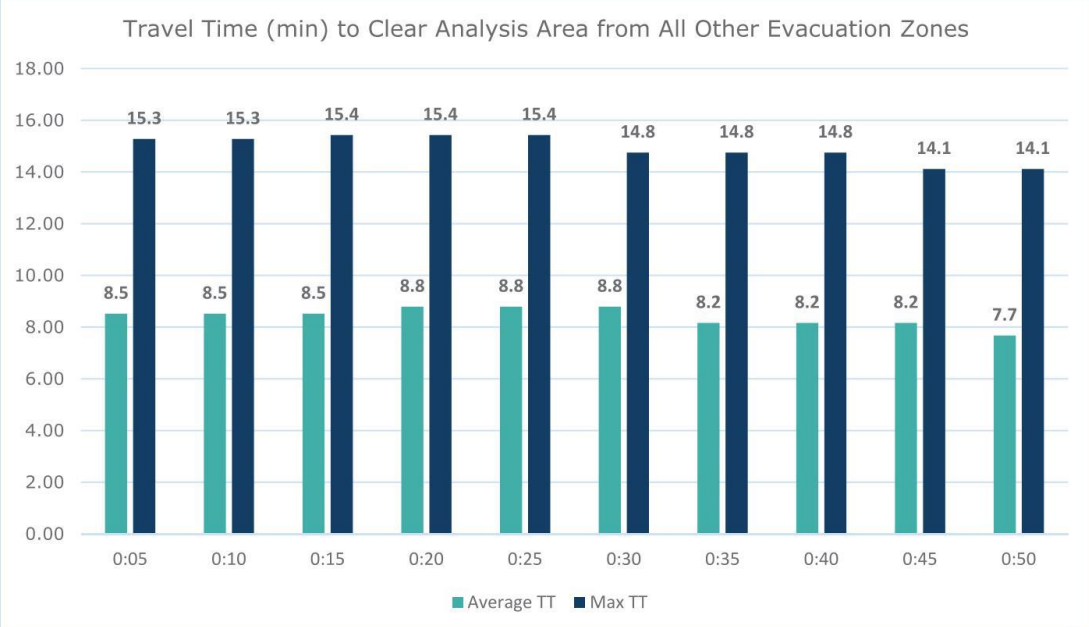




**FIGURE 11: 45-MINUTE WITHOUT GENERATIONS CONSTRUCTION**

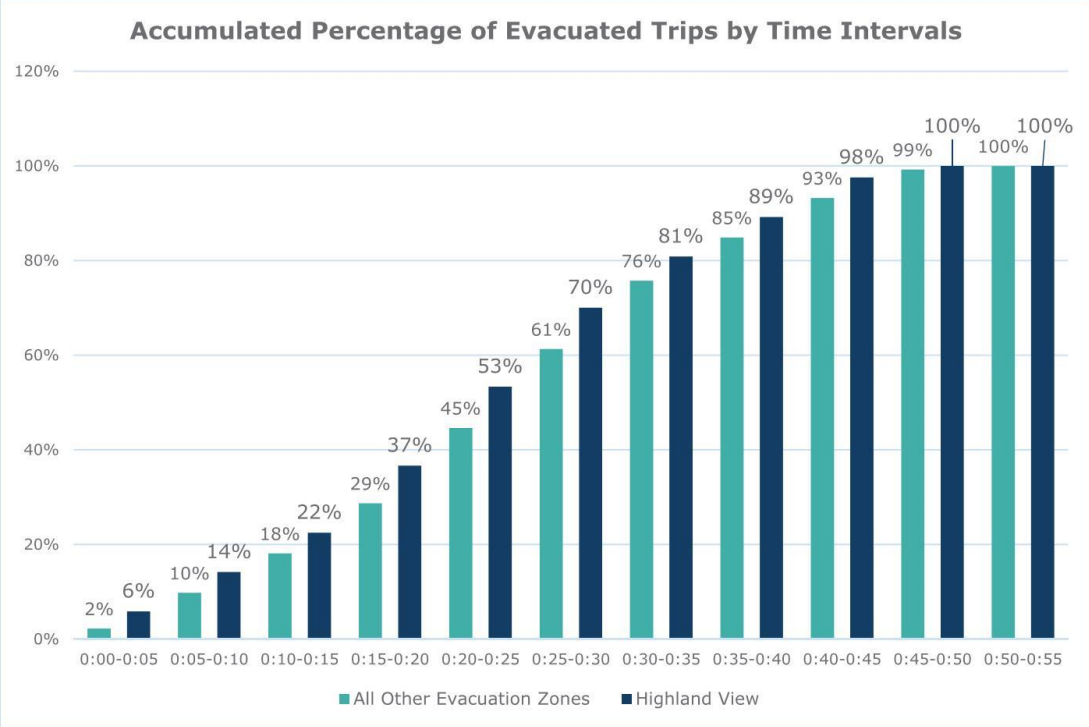



**FIGURE 12: 45-MINUTE SCENARIO WITHOUT GENERATIONS CONSTRUCTION: ACCUMULATED PERCENTAGE OF EVACUATED TRIPS BY TIME INTERVALS**

**Key Observations: 45-Minute – Without Generations Construction**

- Arroyo Vista evacuation trips evacuate west using Malcom Dixon Road directly to Green Valley Road using the Malcom Dixon Cutoff or continue west to Salmon Falls Road. Other evacuation and warning zones access Green Valley Road or Deer Valley Road directly using local streets based on the destination directions described above in the memo.
- The peak evacuation trip demand occurs between 20 and 25 minutes after the start of the Evacuation Order.
- During the peak evacuation time interval, it takes an average of 6.4 minutes and a maximum of 7.6 minutes to clear the analysis area departing from Highland View.
- During the peak evacuation time interval, it takes an average of 8.8 minutes and a maximum of 15.4 minutes to clear the analysis area from all other evacuation zones.
- 30 minutes after the start of the Evacuation Order, 70% of Highland View has evacuated the analysis area and 61% of all other evacuation trips have evacuated the same area.
- 45 minutes after the start of the Evacuation Order, 98% of Highland View has evacuated the analysis area and 93% of all other evacuation trips have evacuated the same area.
- 55 minutes after the start of the Evacuation Order 100% of all trips have cleared the evacuation zone.
- The westbound evacuation queue on Green Valley Road from the Silva Valley Parkway traffic signal is the longest at approximately 0.2 miles 20 minutes after the Evacuation Order (The evacuation zone boundary is 0.9 miles from the traffic signal)
- The eastbound evacuation queue on Green Valley Road from the Silver Springs Parkway traffic signal is minimal throughout the Evacuation Order (The evacuation zone boundary is 0.75 miles from the traffic signal)
- All downstream traffic congestion bottlenecks do not extend into the evacuation zone and do not impede evacuation within the evacuation zone.

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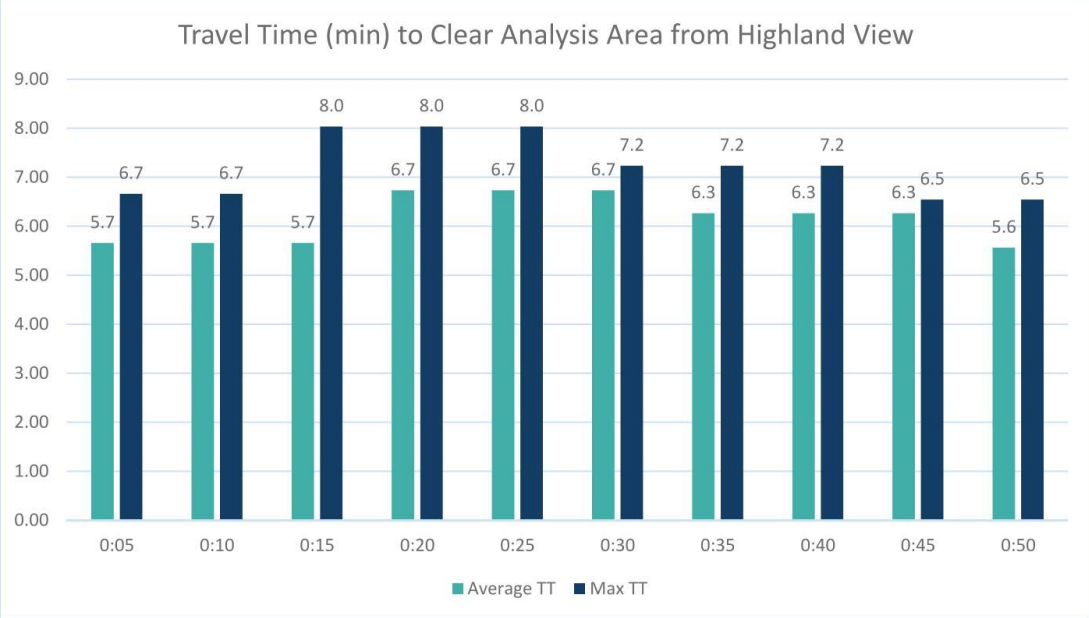
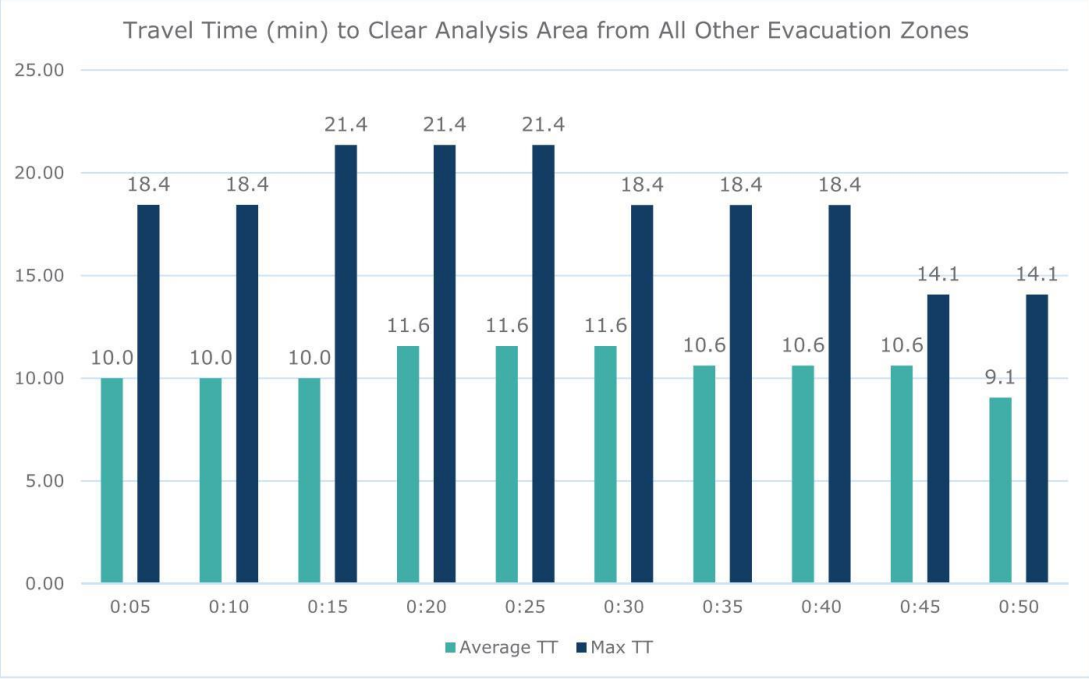
## 45-MINUTE SCENARIO – WITH GENERATIONS CONSTRUCTION



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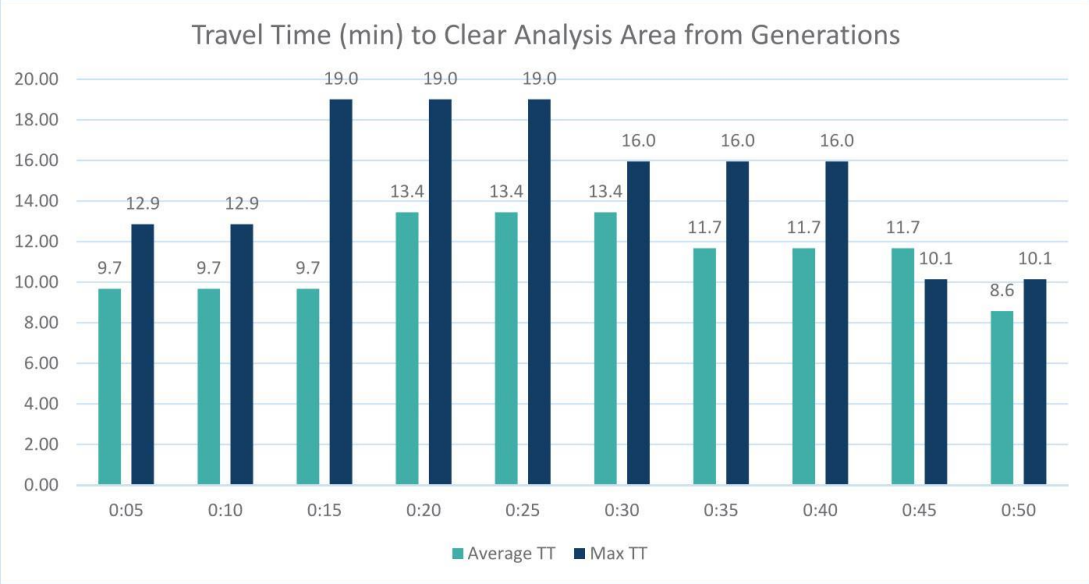


**FIGURE 13: 45-MINUTE WITH GENERATIONS CONSTRUCTION**

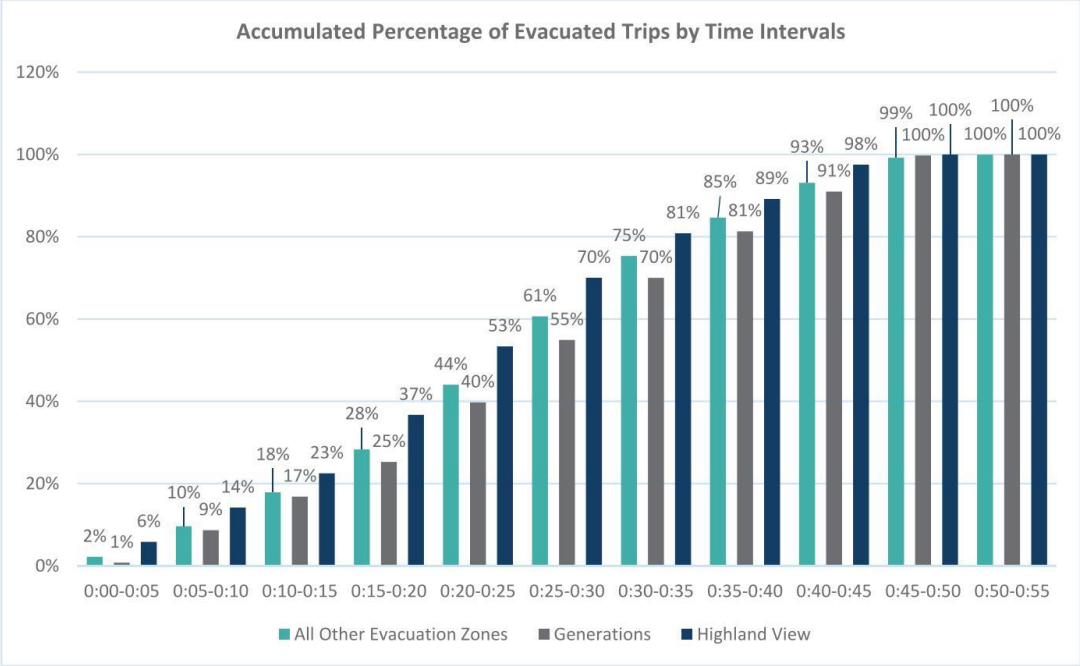


**FIGURE 14: 45-MINUTE SCENARIO WITH GENERATIONS CONSTRUCTION: ACCUMULATED PERCENTAGE OF EVACUATED TRIPS BY TIME INTERVALS**

**Key Observations: 45-Minute – With Generations Construction**

- Arroyo Vista evacuation trips evacuate west using Malcom Dixon Road directly to Green Valley Road using the Malcom Dixon Cutoff or continue west to Salmon Falls Road. Other evacuation and warning zones access Green Valley Road or Deer Valley Road directly using local streets based on the destination directions described above in the memo.
- The peak evacuation trip demand occurs between 20 and 25 minutes after the start of the Evacuation Order.
- During the peak evacuation time interval, it takes an average of 13.5 minutes and a maximum of 19 minutes to clear the analysis area departing from Generations.
- During the peak evacuation time interval, it takes an average of 6.7 minutes and a maximum of 8 minutes to clear the analysis area departing from Highland View.
- During the peak evacuation time interval, it takes an average of 11.6 minutes and a maximum of 21 minutes to clear the analysis area from all other evacuation zones.
- 30 minutes after the start of the Evacuation Order, 55% of Generations and 70% of Highland View have evacuated the analysis area and 61% of all other evacuation trips have evacuated the same area.
- 45 minutes after the start of the Evacuation Order, 91% of Generations and 98% of Highland View have evacuated the analysis area and 93% of all other evacuation trips have evacuated the same area.
- 55 minutes after the start of the Evacuation Order 100% of all trips have cleared the evacuation zone.
- The westbound evacuation queue on Green Valley Road from the Silva Valley Parkway traffic signal is the longest at approximately 0.8 miles  35 minutes after the Evacuation Order (The evacuation zone boundary is 0.9 miles from the traffic signal)
- The eastbound evacuation queue on Green Valley Road from the Silver Springs Parkway traffic signal is approximately 0.3 miles 30 minutes after the evacuation order  throughout the Evacuation Order (The evacuation zone boundary is 0.75 miles from the traffic signal)
- The southbound queue exiting the Generations Primary Access point is around 0.25 miles long 30 minutes after the evacuation order.
- All downstream traffic congestion bottlenecks do not extend into the evacuation zone and do not impede evacuation within the evacuation zone.

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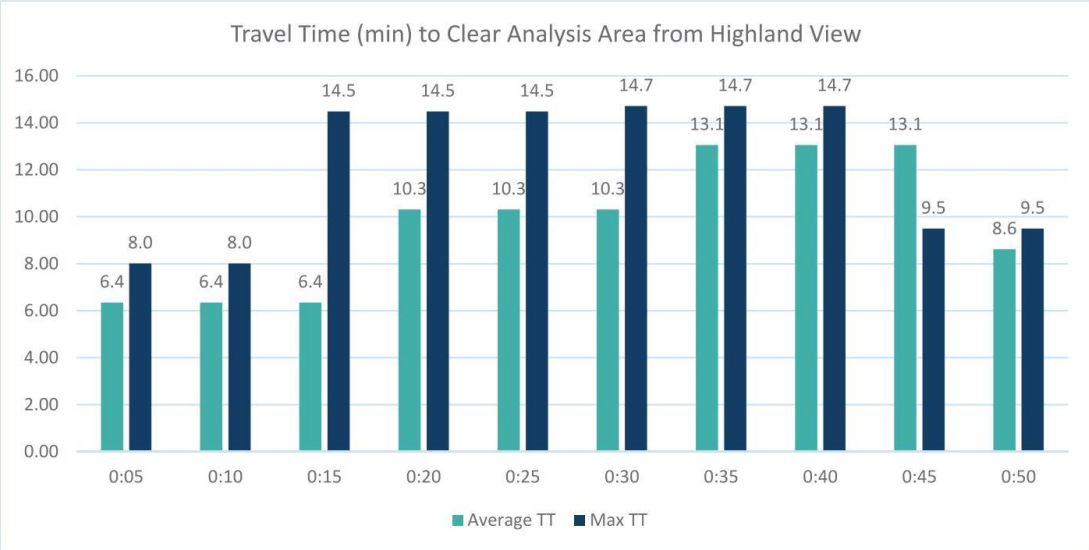
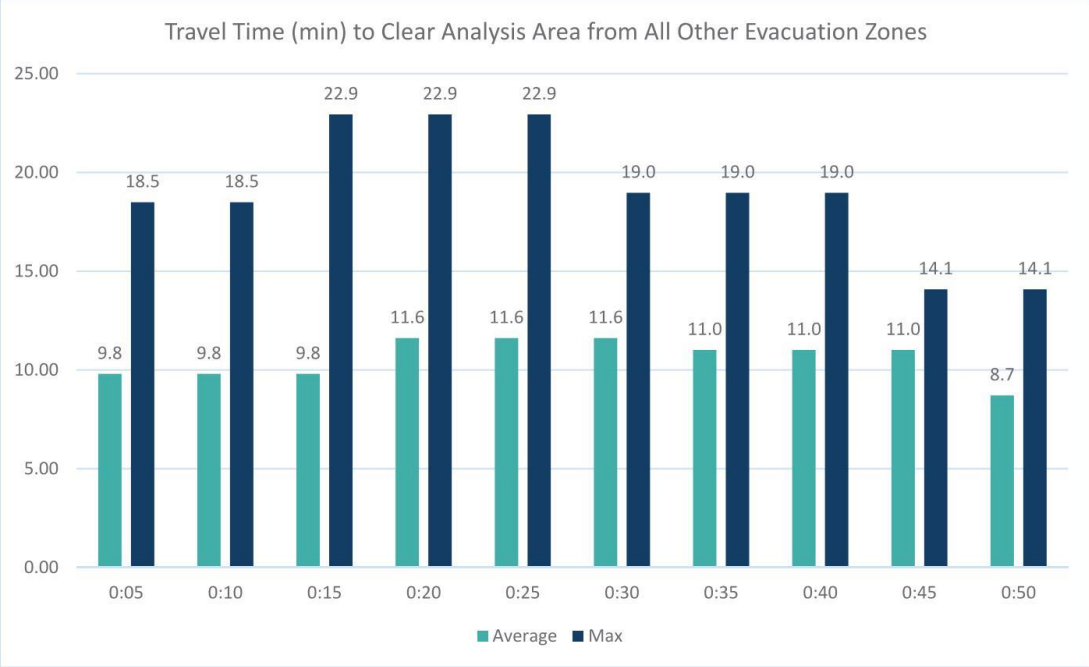
## 45-MINUTE SCENARIO – WITH ACCESS TO LIMA WAY



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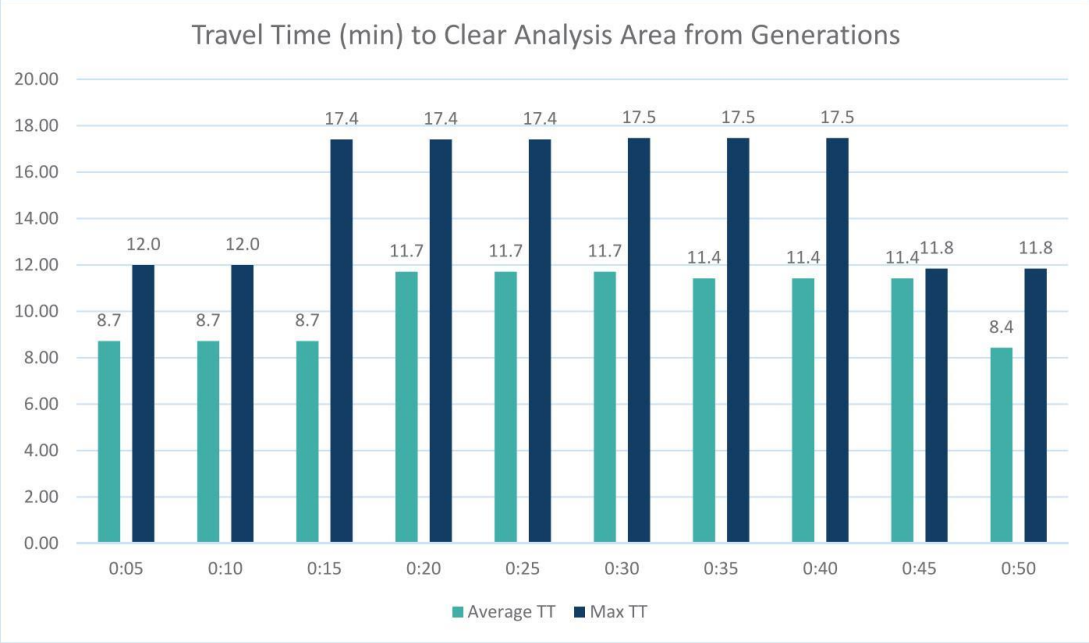


**FIGURE 15: 45-MINUTE WITH LIMA WAY ACCESS**

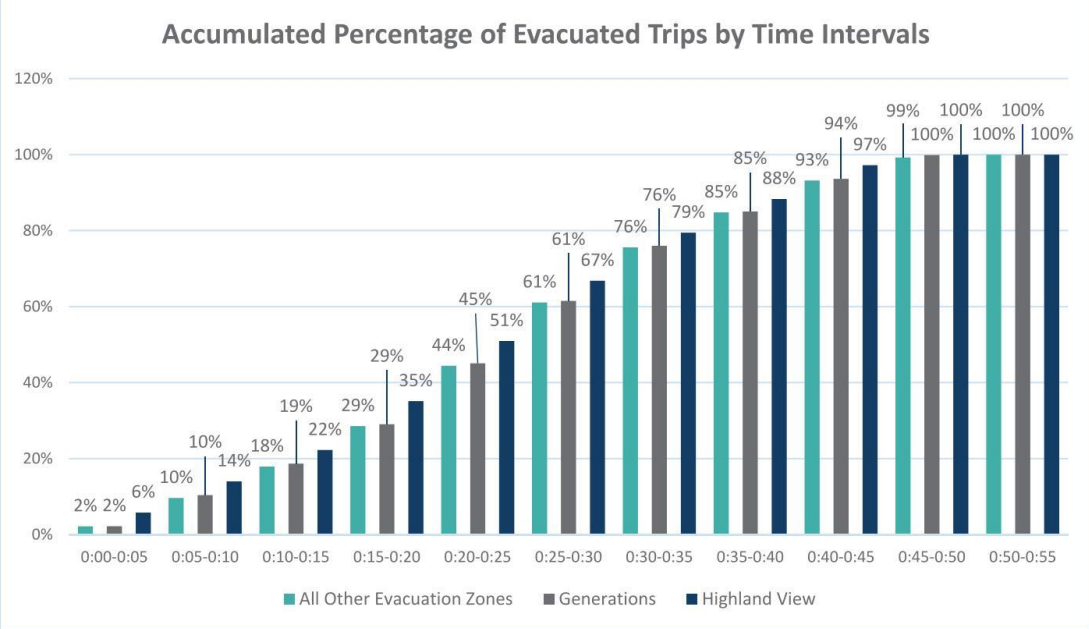


**FIGURE 16: 45-MINUTE SCENARIO WITH LIMA WAY ACCESS: ACCUMULATED PERCENTAGE OF EVACUATED TRIPS BY TIME INTERVALS**

**Key Observations: 45-Minute – With Lima Way Access**

- Arroyo Vista evacuation trips evacuate west using Malcom Dixon Road directly to Green Valley Road using the Malcom Dixon Cutoff or continue west to Salmon Falls Road. Other evacuation and warning zones access Green Valley Road or Deer Valley Road directly using local streets based on the destination directions described above in the memo.
- The peak evacuation trip demand occurs between 20 and 25 minutes after the start of the Evacuation Order.
- During the peak evacuation time interval, it takes an average of 11.7 minutes and a maximum of 17.4 minutes to clear the analysis area departing from Generations.
- During the peak evacuation time interval, it takes an average of 10.3 minutes and a maximum of 14.5 minutes to clear the analysis area departing from Highland View.
- During the peak evacuation time interval, it takes an average of 11.6 minutes and a maximum of 23 minutes to clear the analysis area from all other evacuation zones.
- 30 minutes after the start of the Evacuation Order, 61% of Generations and 67% of Highland View have evacuated the analysis area and 61% of all other evacuation trips have evacuated the same area.
- 45 minutes after the start of the Evacuation Order, 94% of Generations and 97% of Highland View have evacuated the analysis area and 93% of all other evacuation trips have evacuated the same area.
- 55 minutes after the start of the Evacuation Order 100% of all trips have cleared the evacuation zone.
- The westbound evacuation queue on Green Valley Road from the Silva Valley Parkway traffic signal is the longest at approximately 0.5 miles 30 minutes after the Evacuation Order (The evacuation zone boundary is 0.9 miles from the traffic signal)
- The eastbound evacuation queue on Green Valley Road from the Silver Springs Parkway traffic signal is approximately 0.3 miles 30 minutes after the Evacuation Order (The evacuation zone boundary is 0.75 miles from the traffic signal)
- The southbound queue exiting the Generations Primary Access point is around 0.2 miles long 25 minutes after the evacuation order.
- All downstream traffic congestion bottlenecks do not extend into the evacuation zone and do not impede evacuation within the evacuation zone.

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## CONCLUSIONS AND RECOMMEDNATIONS

- The proposed Generations development does not result in significant impact that impedes the evacuation of the development site or increase the total evacuation time estimates of the surrounding evacuation and warning zones as assessed under the parameters defined in this study.
- The use of the Generations Lima Way Evacuation Access/Egress with 30% of the development using the egress through the Highland View Neighborhood does not increase the total evacuation time to clear the Highland View Neighborhood but does slow the evacuation clearance percentage by 3% at the peak evacuation time interval at 30 minutes into the evacuation during the conservative 45-minute scenario.
- Restricting background through traffic on Green Valley Road between Silva Valley Parkway and Silver Springs Parkway during an evacuation event for the Generations and Arroya Vista areas is critical to minimize congestion spilling into the evacuation zone. It is recommended that an emergency traffic control closure be in-place no later than 20 minutes after the start of the evacuation order.
- Evacuation traffic congestion bottlenecks downstream of the evacuation zone stem from capacity limitations at the traffic signals. While these bottlenecks do not result into queuing into the evacuation zone, El Dorado County could further reduce evacuation travel times and or allow additional time before emergency traffic control is in place by investment in a central traffic signal system and communications infrastructure to remotely adjust signal timing parameters for increased vehicle capacity along evacuation routes.
- Additionally Intelligent Transportation System infrastructure improvements that can assist in many different wildfire evacuation scenarios are Pan-Tilt-Zoom (PTZ) installed at traffic signals with remote access to assist agencies and emergency operator monitor and respond to conditions.
- Public Safety Power Shutoffs (PSPSs) can be a strategy used by the utility provider to reduce wildfire risks under extreme weather conditions. These outages can impact traffic signals that have no battery backup system or limited duration systems, resulting in impacts to evacuation operations. Installing traffic signal battery backup systems with sufficient capacity to operate during multi-hour power outages is recommended for traffic signals along evacuation routes.

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## Appendix M: About the Author

This Fire Safe Plan was prepared in 2023 by Phillips Consulting Services of Georgetown, CA. The author, Ronald A. Phillips, has over 40 years of experience in both fire safety and emergency preparedness. Mr. Phillips served in a variety of positions within the California Fire Service including the position of Fire Chief for the City of Folsom between 2010 - 2016. He has a Bachelor of Science degree in Fire Administration along with several state and national program certificates in specialties such as the emergency management, fire prevention, arson & fire investigation, and the incident command system.

Phillips Consulting Services aids both public and private partners in the following areas of expertise:

Δ POST Incident Analysis & After-Action Reviews
Δ Homeland Security Exercises / Improvement Plans
Δ Emergency Management Planning & Documents
Δ Community Fire & Rescue Master Planning
Δ Special Event Planning
Δ Firewise™ Community Assessments & Plans
Δ WUI Site Assessments
Δ Pre-Incident Planning for First Responders
Δ Fire Code Inspections
Δ Emergency Evacuation Planning & Training