Appendix A

Initial Study

EL DORADO COUNTY PLANNING SERVICES
2850 FAIRLANE COURT
PLACERVILLE, CA 95667

INITIAL STUDY
ENVIRONMENTAL CHECKLIST

Project Title: Design Review Permit DR19-0006/Cool General Retail

Lead Agency Name and Address: El Dorado County, 2850 Fairlane Court, Placerville, CA 95667

Contact Person: Evan Mattes, Senior Planner | **Phone Number:** (530) 621-4994

Applicant's Name and Address: Steve Powell, Woodcrest REV; 1410 Main Street, Ste C, Ramona, CA 92065

Project Agent's Name and Address: Same as above.

Project Engineer's Name and Address: MPA Architects; 3578 30th Street, San Diego, CA 92104

Project Location: The project site is located on the east side of State Route 49 (SR 49), south of the intersection with Northside Drive in the community of Cool, El Dorado County, California (see **Figure 1**).

Assessor's Parcel Number: 071-500-037 **Acres:** 1.69 acres

Sections: USGS Auburn 7.5-minute Quadrangle, Sec.18 T:12N R:9E

General Plan Designation: Commercial (C)

Zoning: General Commercial (CG) w/ Design Control (DC) overlay

Description of Project: Design Review Permit for the construction of a 9,100 square foot (s.f.) building for commercial/retail uses (Dollar General Store) and associated on-site improvements including driveway, parking lot, utility, lighting, signage and landscaping on an approximately 1.68-acre undeveloped parcel located on the south side of Northside Drive, east of SR 49 in the County Rural Center of Cool.

Surrounding Land Uses and Setting:

	Zoning	General Plan	Land Use/Improvements
Site	General Commercial with Design Control overlay (GC-DC)	Commercial (C)	Vacant
North	General Commercial with Design Control overlay (GC-DC)	Commercial (C)	Commercial, US Post Office, Restaurant, Offices
South	General Commercial with Design Control overlay (GC-DC)	Commercial (C)	Vacant
East	General Commercial with Design Control	Commercial (C)	Vacant

	overlay (GC-DC)		
West	Community Commercial -Design Control (CC-DC)/Transportation Corridor (TC)	Commercial (C)	Commercial Shopping Center and California State Route 49

Environmental Setting: The undeveloped project site consists of gently sloping to flat topography. Elevations at the site range from approximately 1,525 to 1,555 feet above mean sea level (msl), for a difference of about 30± feet across the entire site. Drainage within the subject property generally flows to the southeast. The site is bordered by commercial development to the north, east, and west, as well as vacant property to the south. Most of the vegetation on the site consists of moderate amounts of annual weeds/grasses, along with small to large trees scattered throughout the subject site (see **Figure 2**).

Other public agencies whose approval may be required (e.g., permits, financing approval, or participation agreement)

1. CalTrans - Encroachment Permit (if required)
2. Georgetown Public Utilities District for water service connection
3. El Dorado County – Grading permit, encroachment permit, building permits, septic permit
4. El Dorado County Fire District – Building plan review

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

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

DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.

☐ I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.

☒ I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect: 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards; and 2) has been addressed by Mitigation Measures based on the earlier analysis as described in attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects: a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION, pursuant to applicable standards; and b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or Mitigation Measures that are imposed upon the proposed project, nothing further is required.

Signature: _____ Date: _____

Printed Name: Evan Mattes, Project Planner For: El Dorado County

Signature: _____ Date: _____

Printed Name: Rommel (Mel) Pabalinas, Current Planning Manager For: El Dorado County

PROJECT DESCRIPTION

Introduction

This Initial Study has been prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts resulting from the proposed project. The project would allow construction and operation of a 9,100 s.f. commercial retail building.

Project Description

The project applicant proposes to construct a 9,100 sq. ft. commercial retail building (Dollar General) on a 1.68-acre site. The single-story building would have a maximum height of 33 feet. The building would be located in the southerly half of the project site, facing the intersection of Highway 49 and Northside Drive (see **Figure 3**). The project design is in the style of new traditional, Western false front architecture. The design is responsive to community input and designed to replicate the "Boardwalk" project on the west side of SR 49. The building has a central entrance, and parapet walls extending along the building façade (see **Figure 5**). The project would include parking for 31 vehicles, a refuse enclosure for solid waste, landscaping, an on-site septic system, and on-site stormwater treatment.

Dollar General hours of operation are Monday thru Sunday 8am to 10pm. Typically, there would be 3 employees during a normal shift and 4-5 customers at a time during peak hours.

Project landscaping would include tree plantings in the parking lot, and a variety of shrubs and ground cover around the parking lot and building. The two mature oak trees at the northwest corner of the property would be preserved, and the area around them left in a natural state. The eastern end of the property would be left undisturbed except where the dedicated septic field would be located.

A monument sign would be located at the northwest corner of the project, near the corner of State Route 49 and Northside Drive. The sign would be approximately 50 s.f., approximately 11 feet above ground surface (at the highest point). The design is a wood framed (or optional steel frame) sign, with channelized internally illuminated letters on a wood grain background.

Project lighting includes at least one parking lot fixture and building mounted lighting ("gooseneck" or similar downward shielding light fixtures).

Project Location and Surrounding Land Uses

The Project site fronts on the East side of Highway 49 (Golden Chain Highway) and the south side of Northside Drive, North of Highway 193 (Georgetown Road) approximately 400 feet, in the community of Cool, El Dorado County, California (see Figure 1). The site is designated Commercial in the General Plan and is zoned General Commercial (GC). The project is within a Rural Center (Cool) as designated by the General Plan. There are no other special designations applicable to the site.

The undeveloped project site consists of gently sloping to flat topography. Elevations at the site range from approximately 1,525 to 1,555 feet above mean sea level (msl), for a difference of about 30± feet across the entire site. Drainage within the subject property generally flows to the southeast. Most of the vegetation on the site consists of moderate amounts of annual weeds/grasses, along with small to large trees scattered throughout the subject site (see Figure 2 and **Figure 4**). There is an existing graded pad area in the center of the site that has been incorporated into the site design.

There is a commercial building north of the project site (across Northside Drive) that includes a restaurant, offices, and a U.S. Post Office, totaling approximately 8,800 s.f. The parcel immediate east is vacant, while further east is a cellular tower (approximately 225 feet). To the south is a vacant parcel and then Highway 193. South of Highway 193 is a retail shopping center, anchored by a Holiday Market. To the west, on the other side of Highway 49, is the central commercial area of Cool, which includes several restaurants, retail stores, a feed and ranch supply store, a gas station, auto repair, and a veterinary hospital. Fire Station No. 72 of the El Dorado County Fire Protection District is located

northwest of the project site, on St. Florian Ct. The Olmstead Loop Trailhead, part of the Auburn State Recreation Area, is located next to the Fire Station.

Project Characteristics

1. Transportation/Circulation/Parking

Project Area Roadways

State Route 49 (SR 49) serves north-south traffic throughout the Sierra Nevada foothills. In and near El Dorado County, State Route 49 runs from Plymouth in Amador County through Diamond Springs, Placerville, Coloma, Pilot Hill, and Cool to Auburn in Placer County. In the vicinity of the project site, SR 49 is a 2-lane facility with no frontage improvements. The posted speed limit is 45 mph.

Northside Drive is a 2-lane (privately maintained) local street that intersects State Route 49 approximately 600 feet north of SR 193.

State Route 193 (SR 193) runs easterly from SR 49 in Cool to an intersection on SR 49 north of Placerville. In the vicinity of the project site, SR 193 is a 2-lane facility with no frontage improvements, although a separated bike path exists along the north side of the road. The posted speed limit is 55 mph.

Project Area Intersections

State Route 49 / St Florian Court intersection is a "Tee" intersection controlled by an eastbound stop sign on St Florian Court. A northbound left turn lane is present on SR 49. The St Florian Court approach is a single lane, and there are no crosswalks present.

State Route 49 / Northside Drive intersection is a "Tee" intersection controlled by a westbound stop sign on Northside Drive. A Two-Way-Left-Turn-Lane is present on SR 49. The Northside Drive approach is a single lane, and there are no crosswalks present.

State Route 49 / Commercial Driveway intersection is a "Tee" controlled by a stop sign on eastbound Commercial Driveway. A Two-Way-Left-Turn-Lane is present on SR 49. The Commercial Driveway is a private drive, and there are no crosswalks present.

State Route 49 / State Route 193 intersection is a four-way intersection controlled by an all-way stop with an overhead flasher. SR 49 has separate left turn lanes on each approach. A southbound right turn lane exists, and the northbound thru lane is wide enough to allow right turns outside of the queue of northbound traffic. The SR 193 westbound approach is wide enough to act as a combined left-thru lane and a separate right turn lane, and the eastbound leg is a single lane private drive. Crosswalks exist on the south and east side of the intersection.

USPS Driveway / Northside Drive intersection is a "Tee" controlled by a stop sign on the southbound USPS Driveway. There are no auxiliary lanes or crosswalks present.

Project Components

Access to the project site is proposed via a single, 40-foot wide driveway on Northside Drive. The driveway would be approximately 35 feet from the USPS driveway to the west and approximately 655 feet from the Cool Boat and RV Storage across Northside Drive to the east. As previously mentioned, the project's Northside Drive frontage is currently unimproved, and other than the driveway access improvements, development of the project would not include additional improvements along the Northside Drive frontage, except as noted to maintain the 24-foot street width.

Onsite, the project proposes to develop a parking lot with 31 parking spaces.

In terms of onsite circulation, regular truck deliveries would consist of 1-2 full size trucks visiting the store each week. The project proponents anticipate that smaller single unit trucks may visit the site each day. The project would result in trucks turning into the site and turning first right into the parking aisle that runs parallel to Northside Drive. From that point the truck would back into the aisle towards the store's rear door. After completing the delivery, the trucks would proceed to Northside Drive. This is a common Dollar General Store configuration, and the parking layout is wide enough to accommodate these movements.

The project would include a Class 2 bike land/path on the east side of SR 49 adjacent to the property frontage. This improvement would either be constructed by the applicant or subject to an in-lieu fee.

2. Utilities and Infrastructure

The project site is served by Georgetown Divide Public Utility District for water. The project would connect to the existing water service on the west side of the property adjacent to SR 49. As the site is not served by a wastewater system, an on-site septic system would be installed. The proposed JET J-1000 NSF certified septic system would be located northeast of the building. The project would connect to the existing stormwater collection system in Northside Drive, and would include an on-site drainage retention area, to the northwest of the parking lot.

An existing overhead electrical line owned by PG&E crosses the property from west to east. This line would be relocated to the north, in coordination with PG&E, to avoid the proposed building. PG&E would provide electrical service to the site.

New privately-maintained road improvements to bring Northside Drive into compliance with minimum pavement width requirements would be constructed on the south side of Northside Drive from the proposed driveway to the easterly property line.

3. Construction Considerations

The project is a vacant previously disturbed parcel. Planned construction would avoid the two mature oak trees at the front (north side) of the property. It is anticipated that the project grading would either be balanced or may require the import of a small amount of fill for the building site.

Project Schedule and Approvals

A Notice of Preparation (NOP) will be circulated, with this Initial Study, for public and agency review for a period of 30 days. Written comments on the NOP should be submitted to the project planner indicated in the Summary section, above. Following the close of the scoping period, an EIR will be prepared in compliance with CEQA (California Public Resources Code, Sections 21000 et seq.) and the CEQA Guidelines. This Initial Study is an informational document for use by the lead agency, El Dorado County, and the public to aid in the planning and decision-making process. The EIR will disclose the physical environmental effects of the project and identify possible ways of reducing or avoiding potentially significant impacts.

The project requires design review approval by the County.

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. If the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is a fair argument that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of Mitigation Measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the Mitigation Measures, and briefly explain how they reduce the effect to a less than significant level.

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:

    a. Earlier Analysis Used. Identify and state where they are available for review.

    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

    c. Mitigation Measures. For effects that are "Less Than Significant With Mitigation Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

    a. the significance criteria or threshold, if any, used to evaluate each question; and
    b. the mitigation measure identified, if any, to reduce the impact to less than significant.

ENVIRONMENTAL IMPACTS

I. AESTHETICS. *Would the project:*				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?				**X**
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				**X**
c. Substantially degrade the existing visual character quality of the site and its surroundings?			**X**	
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			**X**	

Regulatory Setting:

Federal Laws, Regulations, and Policies

No federal regulations are applicable to aesthetics in relation to the proposed project.

State Laws, Regulations, and Policies

In 1963, the California State Legislature established the California Scenic Highway Program, a provision of the Streets and Highways Code, to preserve and enhance the natural beauty of California (Caltrans, 2015). The state highway system includes designated scenic highways and those that are eligible for designation as scenic highways.

There are no officially designated state scenic corridors in the vicinity of the project site.

Local Laws, Regulations, and Policies

The County has several standards and ordinances that address issues relating to visual resources. Many of these can be found in the County Zoning Ordinance (Title 130 of the County Code). The Zoning Ordinance consists of descriptions of the zoning districts, including identification of uses allowed by right or requiring a special-use permit and specific development standards that apply in particular districts based on parcel size and land use density. These development standards often involve limits on the allowable size of structures, required setbacks, and design guidelines. Included are requirements for setbacks and allowable exceptions, the location of public utility distribution and transmission lines, architectural supervision of structures facing a state highway, height limitations on structures and fences, outdoor lighting, and wireless communication facilities.

Visual resources are classified as 1) scenic resources or 2) scenic views. Scenic resources include specific features of a viewing area (or viewshed) such as trees, rock outcroppings, and historic buildings. They are specific features that act as the focal point of a viewshed and are usually foreground elements. Scenic views are elements of the broader viewshed such as mountain ranges, valleys, and ridgelines. They are usually middle ground or background elements of a viewshed that can be seen from a range of viewpoints, often along a roadway or other corridor.

A list of the county's scenic views and resources is presented in Table 5.3-1 of the El Dorado County General Plan EIR (p. 5.3-3). This list includes areas along highways where viewers can see large water bodies (e.g., Lake Tahoe and Folsom Reservoir), river canyons, rolling hills, forests, or historic structures or districts that are reminiscent of El Dorado County's heritage.

Several highways in El Dorado County have been designated by the California Department of Transportation (Caltrans) as scenic highways or are eligible for such designation. These include U.S. 50 from the eastern limits of the Government Center interchange (Placerville Drive/Forni Road) in Placerville to South Lake Tahoe, all of SR 89 within the county, and those portions of SR 88 along the southern border of the county.

Rivers in El Dorado County include the American, Cosumnes, Rubicon, and Upper Truckee rivers. A large portion of El Dorado County is under the jurisdiction of the USFS, which under the Wild and Scenic Rivers Act may designate rivers or river sections to be Wild and Scenic Rivers. To date, no river sections in El Dorado County have been nominated for or granted Wild and Scenic River status.

Discussion: A substantial adverse effect to Visual Resources would result in the introduction of physical features that are not characteristic of the surrounding development, substantially change the natural landscape, or obstruct an identified public scenic vista.

a. **Scenic Vista:** A scenic vista is a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. No scenic vistas have been officially designated for the project site or vicinity in the General Plan (El Dorado County, 2003). Consequently, the development of the proposed project would have **no impact** on a scenic vista.

b. **Scenic Resources:** Highway 49 throughout El Dorado County is classified as an "Eligible State Scenic Highway –
Not Officially Designated." The nearest scenic highway designation is on U.S. 50 between and within the City of Placerville and the Tahoe Basin. This designation occurs approximately 19 miles southeast of the proposed project area. The project area would not be visible from the scenic highway; therefore, the project would have **no impact** to aesthetic resources within the proximity of a state scenic highway.

c. **Visual Character:** The proposed project would result in the construction of a new 9,100-square foot retail store in the community of Cool. Parking facilities are also a part of the project. These elements may result in a change to the visual character of the site by increasing the number of urban structures on otherwise vacant land. However, the site is designated and zoned for commercial land uses and therefore intended to accommodate commercial development under the El Dorado County General Plan. The proposed project would be required to comply with County development standards. The project is subject to design review to ensure it would be consistent with the surrounding commercial uses. The project design reflects the character of the existing commercial development, as shown in **Figure 6**, which shows the commercial development west of SR 49. The project design, architectural treatments, and associated improvements substantially conform to the El Dorado County Design Guide and would not substantially detract from this commercial district. Therefore, construction of the project would not substantially degrade the character of the site or its surroundings, as the new retail store building would be consistent with existing development in the area. This impact is **less than significant**.

d. **Light and Glare**: The proposed project would result in a new building and parking area, both of which may result in an increase of artificial light and glare into the existing environment. Potential sources of light and glare include external building lighting, parking lot lighting, an illuminated sign, and building windows. The introduction of new sources of light and glare may contribute to nighttime light pollution and result in impacts to nighttime views in the area. However, the project would be required to comply with County design standards and outdoor lighting associated with the project would be required to meet the County Zoning Ordinance Section 130.14.170 (Outdoor Lighting). Outdoor lighting associated with the project would be required to be shielded to avoid potential glare affecting day or nighttime views for those that live or travel through the area. In complying with County regulations, the proposed project impact would be **less than**

significant regarding the creation of a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

FINDING: The proposed project would not substantially damage a scenic vista or scenic resource. With adherence to El Dorado County Code of Ordinances (County Code), it is anticipated that impacts related substantially damaging the visual character of a site or creating a new source of substantial light or glare would be less than significant; however, this topic will be further analyzed in the Environmental Impact Report (EIR).

II. AGRICULTURE AND FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by California Department of forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Locally Important Farmland (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				**X**
b. Conflict with existing zoning for agricultural use, or a Williamson Act Contract?				**X**
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				**X**
d. Result in the loss of forest land or conversion of forest land to non-forest use?				**X**
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				**X**

Regulatory Setting:

Federal Laws, Regulations, and Policies

No federal regulations are applicable to agricultural and forestry resources in relation to the proposed project.

State Laws, Regulations, and Policies

Farmland Mapping and Monitoring Program

The Farmland Mapping and Monitoring Program (FMMP), administered by the California Department of Conservation (CDC), produces maps and statistical data for use in analyzing impacts on California's agricultural

resources (CDC 2008). FMMP rates and classifies agricultural land according to soil quality, irrigation status, and other criteria. Important Farmland categories are as follows (CDC 2013a):

Prime Farmland: Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. These lands have the soil quality, growing season, and moisture supply needed to produce sustained high yields. Prime Farmland must have been used for irrigated agricultural production at some time during the 4 years before the FMMP's mapping date.

Farmland of Statewide Importance: Farmland similar to Prime Farmland, but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Farmland of Statewide Importance must have been used for irrigated agricultural production at some time during the 4 years before the FMMP's mapping date.

Unique Farmland: Farmland of lesser quality soils used for the production of the state's leading agricultural crops. These lands are usually irrigated but might include non-irrigated orchards or vineyards, as found in some climatic zones. Unique Farmland must have been cropped at some time during the 4 years before the FMMP's mapping date.

Farmland of Local Importance: Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

California Land Conservation Act of 1965 (Williamson Act)

The California Land Conservation Act of 1965 (commonly referred to as the Williamson Act) allows local governments to enter into contracts with private landowners for the purpose of preventing conversion of agricultural land to non-agricultural uses (CDC 2013b). In exchange for restricting their property to agricultural or related open space use, landowners who enroll in Williamson Act contracts receive property tax assessments that are substantially lower than the market rate.

Z'berg-Nejedly Forest Practice Act

Logging on private and corporate land in California is regulated by the 1973 Z'berg-Nejedly Forest Practice Act. This Act established the Forest Practice Rules (FPRs) and a politically-appointed Board of Forestry to oversee their implementation. The California Department of Forestry (CALFIRE) works under the direction of the Board of Forestry and is the lead government agency responsible for approving logging plans and for enforcing the FPRs.

Discussion: A substantial adverse effect to Agricultural Resources would occur if:

- There is a conversion of choice agricultural land to nonagricultural use, or impairment of the agricultural productivity of agricultural land;
- The amount of agricultural land in the County is substantially reduced; or
- Agricultural uses are subjected to impacts from adjacent incompatible land uses.

a. **Farmland Mapping and Monitoring Program:**
The FMMP El Dorado County Important Farmland map classifies the project site as Urban and Built-up Land (DOC 2016). The project site is designated for commercial uses and is not located within or adjacent to lands designated with the Agricultural (A) General Plan Land Use Overlay. As such, the project would not result in the conversion of any farmland to non-agricultural use and would have **no impact**.

b. **Agricultural Uses:** The project site is not located within a Williamson Act Contract, would not conflict with existing zoning for agricultural use, and would not affect any properties under a Williamson Act Contract. There would be **no impact**.

c.-d. **Loss of Forest land or Conversion of Forest land:** The site is not designated as Timberland Preserve Zone (TPZ) or other forest land according to the EDC General Plan and Zoning Ordinance. The project site does

not support forested areas. No conversion of forest or timber lands would occur as a result of the project. There would be **no impact**.

e. **Conversion of Prime Farmland or Forest Land:** The project would not result in conversion of existing lands designated by the EDC General Plan and/or zoned for agricultural uses, nor is the site designated TPZ or other forestland according to the El Dorado General Plan and Zoning Ordinance. The project site is designated for commercial uses by the EDC General Plan and is zoned for commercial development. There would be **no impact**.

FINDING: The project site does not contain agricultural resources and no impacts would be anticipated to result from the project. This topic would not require analysis in the EIR.

III. AIR QUALITY. *Would the project:*	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?			**X**	
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			**X**	
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			**X**	
d. Expose sensitive receptors to substantial pollutant concentrations?			**X**	
e. Create objectionable odors affecting a substantial number of people?			**X**	

Regulatory Setting:

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. The Clean Air Act is implemented by the U.S. Environmental Protection Agency (USEPA) and sets ambient air limits, the National Ambient Air Quality Standards (NAAQS), for the following criteria air pollutants: particulate matter of aerodynamic radius of 10 micrometers or less (PM10), particulate matter of aerodynamic radius of 2.5 micrometers or less (PM2.5), carbon monoxide (CO), nitrogen dioxide (NO2), ground-level ozone (O3), sulfur dioxide (SO2), and lead. Of these criteria pollutants, particulate matter and ground-level O3 pose the greatest threats to human health. The California Air Resources Board (CARB) sets standards for criteria pollutants in California that are more stringent than the NAAQS and include the following additional contaminants: visibility-reducing particles, hydrogen sulfide (H2S), sulfates, and vinyl chloride.

USEPA and CARB regulate various stationary sources, area sources, and mobile sources. USEPA has regulations involving performance standards for specific sources that may release toxic air contaminants (TACs), known as hazardous air pollutants (HAPs) at the federal level. In addition, USEPA has regulations involving emission criteria for off-road sources such as emergency generators, construction equipment, and vehicles. CARB is responsible for

setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB also establishes passenger vehicle fuel specifications.

The proposed project is located within the Mountain Counties Air Basin (MCAB), which is comprised of seven air districts: the Northern Sierra Air Quality Management District (AQMD), Placer County Air Pollution Control District (APCD),[1] Amador County APCD, Calaveras County APCD, the Tuolumne County APCD, the Mariposa County APCD, and a portion of the El Dorado County AQMD (EDCAQMD), which consists of the western portion of El Dorado County. The EDCAQMD manages air quality for attainment and permitting purposes for both MCAB and Lake Tahoe Air Basin.

Air quality in the project area is regulated by the EDCAQMD. CARB and local air districts are responsible for overseeing stationary source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality-related sections of environmental documents required to comply with CEQA. The AQMD regulates air quality through the federal and state Clean Air Acts, district rules, and its permit authority.

The USEPA and State also designate regions as "attainment" (within standards) or "nonattainment" (exceeds standards) based on the ambient air quality. El Dorado County is in nonattainment status for both federal and state O3 standards and for the state PM10 standard, and is in attainment or unclassified status for other pollutants (CARB 2019).

The EDCAQMD has adopted thresholds to address the significance of air quality impacts resulting from a project in the Guide to Air Quality Assessment (EDCAQMD 2002). These mass daily thresholds are for reactive organic gases (ROG) (also termed volatile organic compounds or VOCs) and oxides of nitrogen (NOx), which are O3 precursors. According to the EDCAQMD, if ROG and NOx are less than significant during construction and operations, then exhaust emissions of other pollutants (such as CO, NO2, PM10, and SO2) from the operation of equipment and other vehicles would also be considered less than significant.

Table 3-1

EDCAQMD Air Quality Significance Thresholds

Pollutant	Construction	Operation
Criteria Pollutants Mass Daily Thresholds (pounds per day)		
ROG	82	82
NO_x	82	82

Source: EDCAQMD 2002.
Notes: EDCAQMD = El Dorado County Air Quality Management District; ROG = Reactive Organic Gases; NOx = oxides of nitrogen.

For qualitative screening, ROG and NO_x Emissions may be assumed to not be significant during construction if:

- The project encompasses 12 acres or less of ground that is being worked at one time during construction and at least one of the recommended mitigation measures related to such pollutants is incorporated into the construction of the project; or
- The project proponent commits to pay mitigation fees in accordance with the provisions of an established mitigation fee program in the district (or such program in another air pollution control district that is acceptable to EDCAQMD); or
- Daily average fuel use is less than 337 gallons per day for equipment from 1995 or earlier, or 402 gallons per day for equipment from 1996 or later

For fugitive dust, if dust suppression measures will prevent visible emissions beyond the boundaries of the project, further calculations to determine particulate emissions are not necessary. For the other criteria pollutants, including CO, PM_{10}, SO_2, NO_2, sulfates, lead, and H_2S, a project is considered to have a significant impact on air quality if it will cause or contribute significantly to a violation of the applicable national or state ambient air quality standard(s).

[1] Portions of Placer County APCD are also located in the Sacramento Valley Air Basin and Lake Tahoe Air Basin.

Naturally occurring asbestos (NOA) is also a concern in El Dorado County because it is known to be present in certain soils and can pose a health risk if released into the air. The EDCAQMD has adopted an El Dorado County Naturally Occurring Asbestos Review Area Map that identifies those areas more likely to contain NOA (El Dorado County 2015).

The *Guide to Air Quality Assessment* also includes a Table (Table 5.2) listing project types with potentially significant emissions during operations.

The EDCAQMD has developed the *Guide to Air Quality Assessment* to evaluate project specific impacts and help determine if air quality mitigation measures are needed, or if potentially significant impacts could result. A substantial adverse effect on air quality would occur if:

- Emissions of ROG and NO_x will result in construction or operation emissions greater than 82 pounds per day;
- Emissions of PM_{10}, CO, SO_2 and NO_2, as a result of construction or operation emissions, will result in ambient pollutant concentrations in excess of the applicable National or State Ambient Air Quality Standard (AAQS). Special standards for O_3, CO, and visibility apply in the Lake Tahoe Air Basin portion of the County; or
- Emissions of TACs cause cancer risk greater than 1 in 1 million (10 in 1 million if best available control technology for toxics is used) or a non-cancer Hazard Index greater than 1. In addition, the project must demonstrate compliance with all applicable EDCAQMD, State and USEPA regulations governing toxic and hazardous emissions.

a. **Air Quality Plan:** As mentioned previously, the MCAB is currently non-attainment for O_3 (state and federal ambient standards) and particulate matter (PM_{10}) (state ambient standard). While an air quality plan exists for O_3, none currently exists for particulate matter. The Sacramento Regional 2008 NAAQS (National Ambient Air Quality Standards) 8-Hour Ozone Attainment Plan and Reasonable Further Progress Plan (Ozone Attainment Plan) was developed for application within the Sacramento region, including the MCAB portion of El Dorado County (EDCAQMD *et al*. 2017). If a project can demonstrate consistency with the Ozone Attainment Plan for ROG and NO_x emissions, it would be determined that it would not have a significant cumulative impact with respect to O_3.

Projects within the MCAB portion of the County must demonstrate Ozone Attainment Plan consistency with the following four indicators:

1. The project does not require a change in the existing land use designation (e.g., a general plan amendment or rezone), or projected emissions of ROG and NOx from a project are equal to or less than the emissions anticipated for the site if development under the existing land use designation;
2. The project does not exceed the "project alone" significance criteria;
3. The lead agency for the project requires the project to implement any applicable emission reduction measures contained in and/or derived from the Ozone Attainment Plan; and
4. The project complies with all applicable district rules and regulations.

The first way to assess project compliance with the Ozone Attainment Plan is to ensure that the population density and land use are consistent with the growth assumptions used in the plans for the MCAB. The project includes no uses that would generate a long-term increase in population and does not require a change in land use designations applied to the project site. Therefore, the project would be consistent with the regional growth forecasts and would not conflict with or exceed the assumptions of the Ozone Attainment Plan.

The second criterion assesses a project's contribution to existing air quality violations. Criteria air pollutant emissions associated with construction and operation of the project were estimated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2. As discussed in b) below, it was determined that the project would not contribute to an air quality violation because construction and operational emissions would not exceed the EDCAQMD thresholds of significance for ROG or NO_x emissions.

The third criterion is compliance with control measures in the Ozone Attainment Plan. Most of the control strategies in the Ozone Attainment Plan include measures in the categories of transportation and stationary sources. The non-regulatory control measures include; on-road and off-road mobile incentive programs, and an emerging/voluntary urban forest development program. These are followed by the regulatory control measures, which include; indirect source rules and a variety of stationary and area-wide source control measures. CARB's strategy for reducing mobile source emissions includes the following: new engine standards, reducing emissions from in-use fleet, requiring the use of cleaner fuels, supporting the use of alternative fuels, and pursuing long-term advanced technology measures. The project would result in no conflict with CARB's strategy for controlling mobile source emissions. In addition, the project would be required to adhere to EDCAQMD Rule 215 – Architectural Coatings, which restricts the VOC content of coatings.

The final criterion is compliance with the EDCAQMD rules and regulations. The EDCAQMD has adopted rules designed specifically to address a variety of air quality impacts through measures that construction and operational related air quality emissions. The project would be required by law to comply with all applicable rules and regulations. Rules designed to control air pollutant emissions, and which may be applicable to the project include:

- Rule 210 related to the discharge of air contaminants
- Rule 215 related to application of architectural coatings.
- Rule 223 related to fugitive dust
- Rule 223-1 related to construction related fugitive dust
- Rule 223-2 related to asbestos
- Rule 224 relates to application of cutback or emulsified asphalt for paving.

Notably, pursuant to Rule 223-1, any activities associated with future plans for grading and construction would require a Fugitive Dust Control Plan (FDCP) for grading and construction activities. Such a plan would address grading measures and operation of equipment to minimize and reduce the level of defined particulate matter exposure and/or emissions to a less than significant level.

In summary, the project would not conflict with the growth assumptions for the region, does not exceed the EDCAQMD significance thresholds, would be consistent with all control measures of the Ozone Attainment Plan, and would comply with applicable EDCAQMD rules. Based on these considerations, the project would not conflict with or obstruct implementation of an applicable air quality plan. The impact would be **less than significant**.

b-c. **Air Quality Standards and Cumulative Impacts:** The following discussion evaluates the potential for the project's construction and operational emissions to result in a considerable contribution to the region's cumulative air quality impact.

Construction

Construction of the project would result in the addition of pollutants to the local air shed caused by soil disturbance, fugitive dust emissions, and combustion pollutants from on-site construction equipment, as well as from off-site trucks hauling construction materials. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and for dust, the prevailing weather conditions. Therefore, such emission levels can only be estimated, with a corresponding uncertainty in precise ambient air quality impacts. Fugitive dust (PM_{10} and $PM_{2.5}$) emissions would primarily result from earthwork activities. NO_x and CO emissions would primarily result from the use of construction equipment and motor vehicles.

Construction of the project is anticipated to occur over a 4.5-month (135 day) period. For the purpose of this analysis, construction activities were assumed to begin in September 2020 and would be completed in February

2021. Construction scenario assumptions, including phasing, equipment mix, and vehicle trips, were based on information provided by the applicant and CalEEMod generated default values. Complete detailed construction assumptions are included in the CalEEMod and energy usage documentation (Dudek 2020a). Table 3-2 presents the estimated maximum unmitigated daily construction emissions generated during construction of the project.

Table 3-2

Maximum Daily Unmitigated Construction Emissions

Year	ROG	NO_x
	Pounds per Day	
2020	2.11	18.39
2021	36.82	14.11
Maximum Daily Emissions	**36.82**	**18.39**
EDCAQMD Threshold	*82*	*82*
Threshold exceeded?	**No**	**No**

Source: Dudek 2020a.
Notes: EDCAQMD = El Dorado County Air Quality Management District; ROG = reactive organic gases; NO_x = oxides of nitrogen
The values shown are the maximum summer or winter daily emissions results from CalEEMod.

As shown in Table 3-2, ROG and NO_x emissions would not exceed the EDCAQMD significance thresholds; therefore, the project would have a less than significant impact. According to the EDCAQMD, if ROG and NO_x are less than significant during construction, then exhaust emissions of other pollutants from the operation of equipment and other vehicles would also be considered less than significant. Further, existing regulations implemented at issuance of building and grading permits would ensure that any construction related fugitive dust emissions would be reduced to acceptable levels. Therefore, the project would result in a **less than significant** impact in regard to criteria air pollutant emissions generated during construction.

Operation

Operation of the proposed project would generate criteria pollutant emissions from mobile sources (vehicular traffic), area sources (consumer products, natural gas hearths, architectural coatings, and landscaping equipment), energy sources (natural gas consumption). CalEEMod was used to estimate daily emissions from project-related operational sources for year 2022, the first full year after completion of construction. Table 3-3 summarizes the operational emissions criteria pollutants that would be generated from the project. Operational emissions were then compared to the EDCAQMD operational thresholds.

Table 3-3

Maximum Daily Unmitigated Operational Emissions

Year	ROG	NO_x
	Pounds per Day	
Area	0.26	<0.01
Energy	<0.01	0.02
Mobile	1.39	3.59
Total	**1.65**	**3.61**
EDCAQMD Threshold	*82*	*82*
Threshold exceeded?	**No**	**No**

Source: Dudek 2020a.
Notes: EDCAQMD = El Dorado County Air Quality Management District; ROG = reactive organic gases; NO_x = oxides of nitrogen
The values shown are the maximum summer or winter daily emissions results from CalEEMod.

As indicated in Table 3-3, operational emissions of ROG and NO_x would not exceed the EDCAQMD significance thresholds resulting from development of the project. Furthermore, if ROG and NO_x are less than significant during construction, then exhaust emissions of other pollutants would also be considered less than significant. Therefore, the project impact would be **less than significant** in regard to criteria air pollutant emissions generated during operations.

d. **Sensitive Receptors:** The CEQA Guidelines (14 CCR 15000) identify sensitive receptors as facilities that house or attract children, the elderly, people with illnesses, or others that are especially sensitive to the effects of air pollutants. Hospitals, schools, and convalescent hospitals are examples of sensitive receptors. The discussion below reviews the significance of emissions within the context of potential impacts to sensitive receptors. Sensitive receptors in the vicinity of the project include single family residences east of the project site, the nearest of which is approximately 775 feet away.

Toxic Air Contaminants

TACs are defined as substances that may cause or contribute to an increase in deaths or in serious illness, or that may pose a present or potential hazard to human health. Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The EDCAQMD recommends an incremental cancer risk threshold of 10 in 1 million (with implementation of best available control technology for toxics). "Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-, 30-, and 70-year exposure period will contract cancer based on the use of standard California Office of Environmental Health Hazard Assessment (OEHHA) risk-assessment methodology (OEHHA 2015). In addition, some TACs have non-carcinogenic effects. EDCAQMD recommends a Hazard Index of 1 or more for acute (short-term) and chronic (long-term) non-carcinogenic effects. The TAC that would potentially be emitted during construction activities associated with development of the proposed project would be diesel particulate matter (DPM).

Diesel particulate matter emissions would be emitted from heavy equipment operations and heavy-duty trucks. Heavy-duty construction equipment is subject to a CARB Airborne Toxics Control Measure for diesel construction equipment to reduce diesel particulate emissions. According to the OEHHA, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period for the maximally exposed individual resident; however, such assessments should be limited to the period and duration of activities associated with the proposed project. The 4.5-month duration of the proposed construction activities would only constitute about 1.25% of the total 30-year exposure period. The active construction period for the proposed project would be approximately 135 days, after which construction-related TAC emissions would cease. EDCAQMD considers implementation of "project alone" mitigation requirements, and compliance with all applicable emission limits and mitigation measures required by the USEPA, CARB, EDCAQMD rules and regulations, and local ordinances sufficient for a finding of less than significant related to TACs. As discussed previously, the project would result in a less than significant impact pertaining to exhaust PM_{10} emissions, which is a surrogate for DPM. Due to the relatively short period of exposure, the substantial distance to the nearest sensitive receptor, and minimal particulate emissions generated, TACs emitted during construction would not be expected to result in concentrations causing significant health risks, which would be a less-than-significant impact.

NOA is also a TAC that could be generated during earthmoving activities in areas of El Dorado County. Site soils have been classified by the Natural Resources Conservation Service as containing Delpiedra loam, a soil that contains weathered serpentine at depths of about 12 inches. Additionally, the site is located in an area identified as within a quarter mile of areas likely to contain asbestos (Bole & Associates 2019a; El Dorado County 2015). Unless a geotechnical survey of the site is conducted that determines that there are no serpentine soils on the property, the project would be subject to EDCAQMD Rule 223 (Fugitive Dust – General Requirements) and 223-2 (Fugitive Dust - Asbestos Hazard Mitigation) that would require the implementation of general dust control measures as well as the preparation and implementation of an Asbestos Dust Mitigation Plan during construction to ensure that any potential exposure to NOA during project construction would be minimized.

Operation of the project would not result in any non-permitted direct emissions (e.g., those from a point source such as diesel generators) or result in substantial diesel vehicle trips (i.e., delivery trucks). According to the *Traffic Impact Analysis* (KD Anderson 2019), the project would result in approximately 1 to 2 full size delivery trucks per week, with smaller single unit trucks potentially visiting daily. Based on the above considerations, the project would not result in exposure of sensitive receptors in the vicinity of the project site to substantial TAC concentrations due to operations. This impact would be less than significant.

Health Effects of Criteria Air Pollutants

ROG and NO_x are precursors to O_3, for which the MCAB is designated as nonattainment with respect to the NAAQS and California Ambient Air Quality Standards (CAAQS). Thus, existing O_3 levels in the MCAB are at unhealthy levels during certain periods. The health effects associated with O_3 are generally associated with reduced lung function. Because the project involves construction or operational activities that would not result in ROG or NO_x emissions that would exceed the EDCAQMD thresholds, the project is not anticipated to substantially contribute to regional O_3 concentrations and the associated health impacts.

CO, PM_{10}, and other pollutants are evaluated for significance by comparison against the NAAQS and CAAQS. A project would be considered significant if it is projected to cause a violation of any NAAQS and/or CAAQS. The MCAB portion of El Dorado County is classified as attainment (or unclassified) for all NAAQS and CAAQS for CO, $PM_{2.5}$, NO_2, SO_2, sulfates, lead, and H_2S, and is classified as nonattainment for the state 24-hour PM_{10} standard.

Emissions of CO, PM_{10}, and other pollutants generated from operation of the project would be considered significant if:

1. The project's contribution by itself would cause a violation of the AAQS, or
2. The project's contribution plus the background level would result in a violation of the AAQS and either
    a. A sensitive receptor is located within a quarter-mile of the project, or
    b. The project's contribution exceeds 5% of the AAQS

The EDCAQMD considers lead, sulfates, and H_2S to be less than significant except from industrial sources that result in these pollutants being directly emitted. The project would not include these sources and thus any potential emissions of lead, sulfates, and H_2S would be less than significant.

The EDCAQMD considers projects that fall below the significance levels for ROG and NO_x emissions to also fall below significance thresholds for the other criteria air pollutants, including CO, NO_2, PM_{10}, and SO_2. As discussed in b) above, ROG and NO_x emission would be below the thresholds of significance during project construction and operations. Therefore, project emissions of other criteria air pollutants would also be less than significant.

Visibility impacts are controlled through state and federal regulatory programs that govern vehicle emissions and through mitigation required for O_3 precursors and particulate matter. Due to these regulatory controls, EDCAQMD assumes that visibility impacts from projects in the MCAB portion of the County are less than significant.

In summary, the proposed project would not make a potentially significant contribution to regional concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants. Therefore, impacts would be less than significant.

e. **Objectionable Odors:** Other emissions associated with the project are anticipated to be limited to odors, which is assessed herein. The occurrence and severity of potential odor impacts depend on numerous factors. The nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receiving location each contributes to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying, cause distress, and generate citizen complaints.

Common sources of odors include wastewater treatment plants, landfills, transfer stations, composting facilities, refineries, chemical plants, and food processing plants (EDCAQMD 2002). The proposed project would include development of a retail store, which is not anticipated to generate new odors or increase emissions of odors. During project construction, exhaust from equipment may produce discernible odors typical of most construction sites. Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from the tailpipes of construction equipment. However, such odors would disperse rapidly from the project site and generally occur at magnitudes that would not affect substantial numbers of people. Accordingly, impacts associated with odors would be **less than significant**.

Mitigation Measures: None Required.

FINDING: It is anticipated that the project would not affect the implementation of regional air quality regulations or management plans, cause substantial adverse effects to air quality, or exceed established significance thresholds for air quality impacts; however, these topics will be further analyzed in the EIR.

IV. BIOLOGICAL RESOURCES. *Would the project:*				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		**X**		
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				**X**
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				**X**
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			**X**	
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			**X**	
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				**X**

Regulatory Setting:

Federal Laws, Regulations, and Policies

Endangered Species Act

The Endangered Species Act (ESA) (16 U.S. Code [USC] Section 1531 *et seq*.; 50 Code of Federal Regulations [CFR] Parts 17 and 222) provides for conservation of species that are endangered or threatened throughout all or a substantial portion of their range, as well as protection of the habitats on which they depend. The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) share responsibility for implementing the ESA. In general, USFWS manages terrestrial and freshwater species, whereas NMFS manages marine and anadromous species.

Section 9 of the ESA and its implementing regulations prohibit the "take" of any fish or wildlife species listed under the ESA as endangered or threatened, unless otherwise authorized by federal regulations. The ESA defines the term "take" to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (16 USC Section 1532). Section 7 of the ESA (16 USC Section 1531 *et seq*.) outlines the procedures for federal interagency cooperation to conserve federally listed species and designated critical habitats. Section 10(a)(1)(B) of the ESA provides a process by which nonfederal entities may obtain an incidental take permit from USFWS or NMFS for otherwise lawful activities that incidentally may result in "take" of endangered or threatened species, subject to specific conditions. A habitat conservation plan (HCP) must accompany an application for an incidental take permit.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 USC, Chapter 7, Subchapter II) protects migratory birds. Most actions that result in take, or the permanent or temporary possession of, a migratory bird constitute violations of the MBTA. The MBTA also prohibits destruction of occupied nests. USFWS is responsible for overseeing compliance with the MBTA.

Bald and Golden Eagle Protection Act

The federal Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), first enacted in 1940, prohibits "taking" bald eagles, including their parts, nests, or eggs. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." The definition for "Disturb" includes injury to an eagle, a decrease in its productivity, or nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior. In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present.

Clean Water Act

Clean Water Act (CWA) section 404 regulates the discharge of dredged and fill materials into waters of the U.S., which include all navigable waters, their tributaries, and some isolated waters, as well as some wetlands adjacent to the aforementioned waters (33 CFR Section 328.3). Areas typically not considered to be jurisdictional waters include non-tidal drainage and irrigation ditches excavated on dry land, artificially irrigated areas, artificial lakes or ponds used for irrigation or stock watering, small artificial waterbodies such as swimming pools, vernal pools, and water-filled depressions (33 CFR Part 328). Areas meeting the regulatory definition of waters of the U.S. are subject to the jurisdiction of U.S. Army Corps of Engineers (USACE) under the provisions of CWA Section 404. Construction activities involving placement of fill into jurisdictional waters of the U.S. are regulated by USACE through permit requirements. No USACE permit is effective in the absence of state water quality certification pursuant to Section 401 of CWA.

Section 401 of the CWA requires an evaluation of water quality when a proposed activity requiring a federal license or permit could result in a discharge to waters of the U.S. In California, the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs) issue water quality certifications. Each RWQCB is responsible for implementing Section 401 in compliance with the CWA and its water quality control plan (also known as a Basin Plan). Applicants for a federal license or permit to conduct activities that may result in the discharge to waters of the U.S. (including wetlands or vernal pools) must also obtain a Section 401 water quality certification to ensure that any such discharge will comply with the applicable provisions of the CWA.

State Laws, Regulations, and Policies

California Fish and Game Code

The California Fish and Game Code includes various statutes that protect biological resources, including the Native Plant Protection Act of 1977 (NPPA) and the California Endangered Species Act (CESA). The NPPA (California Fish and Game Code Section 1900-1913) authorizes the Fish and Game Commission to designate plants as endangered or rare and prohibits take of any such plants, except as authorized in limited circumstances.

CESA (California Fish and Game Code Section 2050–2098) prohibits state agencies from approving a project that would jeopardize the continued existence of a species listed under CESA as endangered or threatened. Section 2080 of the California Fish and Game Code prohibits the take of any species that is state listed as endangered or threatened, or designated as a candidate for such listing. California Department of Fish and Wildlife (CDFW) may issue an incidental take permit authorizing the take of listed and candidate species if that take is incidental to an otherwise lawful activity, subject to specified conditions.

California Fish and Game Code Section 3503, 3513, and 3800 protect native and migratory birds, including their active or inactive nests and eggs, from all forms of take. In addition, Section 3511, 4700, 5050, and 5515 identify species that are fully protected from all forms of take. Section 3511 lists fully protected birds, Section 5515 lists fully protected fish, Section 4700 lists fully protected mammals, and Section 5050 lists fully protected amphibians.

Streambed Alteration Agreement

Sections 1601 to 1606 of the California Fish and Game Code require that a Streambed Alteration Application be submitted to CDFW for any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake. As a general rule, this requirement applies to any work undertaken within the 100-year floodplain of a stream or river containing fish or wildlife resources.

California Native Plant Protection Act

The California Native Plant Protection Act (California Fish and Game Code Section 1900–1913) prohibits the taking, possessing, or sale of any plants with a state designation of rare, threatened, or endangered (as defined by CDFW). The California Native Plant Society (CNPS) maintains a list of plant species native to California that has low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Plants of California (CNPS 2001). Potential impacts to populations of CNPS-listed plants receive consideration under CEQA review.

Forest Practice Act

Logging on private and corporate land in California is regulated by the Z'Berg-Nejedly Forest Practices Act (FPA), which took effect January 1, 1974. The act established the Forest Practice Rules (FPRs) and a politically-appointed Board of Forestry to oversee their implementation. The California Department of Forestry (CALFIRE) works under the direction of the Board of Forestry and is the lead government agency responsible for approving logging plans and for enforcing the FPRs. A Timber Harvest Plan (THP) must be prepared by a Registered Professional Forester (RPF) for timber harvest on virtually all non-federal land. The FPA also established the requirement that all non-federal forests cut in the State be regenerated with at least three hundred stems per acre on high site lands, and one hundred fifty trees per acre on low site lands.

Local Laws, Regulations, and Policies

The County General Plan also include policies that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that address potential impacts on special-status plant species or create opportunities for habitat improvement. The El Dorado County General Plan designates the Important Biological Corridor (IBC) (Exhibits 5.12-14, 5.12-5 and 5.12-7, El Dorado County, 2003). Lands located within the overlay district are subject to the following provisions, given that they do not interfere with agricultural practices:

- Increased minimum parcel size;
- Higher canopy-retention standards and/or different mitigation standards/thresholds for oak woodlands;
- Lower thresholds for grading permits;
- Higher wetlands/riparian retention standards and/or more stringent mitigation requirements for wetland/riparian habitat loss;
- Increased riparian corridor and wetland setbacks;
- Greater protection for rare plants (e.g., no disturbance at all or disturbance only as recommended by U.S. Fish and Wildlife Service/California Department of Fish and Wildlife);
- Standards for retention of contiguous areas/large expanses of other (non-oak or non-sensitive) plant communities;
- Building permits discretionary or some other type of "site review" to ensure that canopy is retained;
- More stringent standards for lot coverage, floor area ratio (FAR), and building height; and
- No hindrances to wildlife movement (e.g., no fences that would restrict wildlife movement).

Discussion: A substantial adverse effect on Biological Resources would occur if the implementation of the project would:

- Substantially reduce or diminish habitat for native fish, wildlife or plants;
- Cause a fish or wildlife population to drop below self-sustaining levels;
- Threaten to eliminate a native plant or animal community;
- Reduce the number or restrict the range of a rare or endangered plant or animal;
- Substantially affect a rare or endangered species of animal or plant or the habitat of the species; or
- Interfere substantially with the movement of any resident or migratory fish or wildlife species.

The biological resources discussion is based on the Biological Assessment and Wetland Determination report prepared by Bole & Associates (Revised February 18, 2020) to assess the project's potential impact to federal and state special status plants and wildlife species and their habitats.

The subject property is located in the foothills of the Sierra Nevada Mountain range. The site consists of gently rolling topography, with a central portion that is predominantly level with gravel surfacing. The eastern portion of the site slopes up to an elevation of approximately 1,550 feet; the central portion is at approximately 1,530 feet. The property slopes sharply towards the west in the western portion of the site to an elevation of approximately 1,520 feet. The vegetation series, according to Sawyer and Keeler-Wolf (1995), is California Annual and Non- Native Grassland Series. A number of large and small diameter blue oak, interior live oak, and gray pine were located throughout the site, primarily in the eastern portion of the site.

a. **Special Status Species and Sensitive Natural Communities:** As noted in the biological assessment, potential special status species were considered based on field survey results, a review of the Federal Endangered and Threatened Species list for El Dorado County, California Natural Diversity Database (CNDDB), CNPS literature, and database information provided by the USFWS (IPaC Federal listed species database for Auburn 7 ½ Minute Quad). Special status wildlife species identified as potentially occurring within the project vicinity include Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*), Yates snail (*Ammonitella yatesii*), Alabaster Cave harvestman (*Banksula californica*), obscure bumble bee (*Bombus caliginosus*), Morrison bumble bee (*Bombus morrisoni*), western bumble bee (Bombus occidentalis), Cosumnes stripetail (Cosumnoperia hypocrena), vernal pool andrenid bee (Andrena

subapasta), vernal pool fairy shrimp (*Branchinecta lynchi*), California linderiella (*Linderiella occientalis*), western pearlshell (*Margaritifera falcate*), California red-legged frog (*Rana draytonii*), foothill yellow-legged frog (*Rana boylii*), western pond turtle (*Emys marmorata*), coast horned lizard (*Ohrynosoma Blainvillii*), Delta smelt (*Hypomesus transpacificus*), Central Valley Steelhead (*Oncorhynchus mykiss Irideus pop. 11*), Pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), North American porcupine (*Emys marmorata*), Fisher - West Coast DPS (*Pekania pennanti*), tricolored blackbird (*Agelaius tricolor*), white-tailed kite (*Ellanus leucurus*), American peregrine falcon (*Falco peregrinus anatum*), bald eagle (*Haliaeetus leucocephalus*), California black rail (*Laterallus jamaicensis coturniculus*), osprey (*Pandion hallaetus*), purple martin (*Progne subis*), and bank swallow (*Riparia riparia*). 17 special status plant species were identified as occurring within the project vicinity.
Onsite surveys did not reveal the presence of any special status wildlife or plant species or their specific micro-habitat. No sensitive habitats were identified within the site boundary. Based on the specific habitat characteristics of subject property, the report concluded that no special status plant or wildlife species would be impacted by this project.

The report concluded that while raptor species, including the red-tailed hawk and barn owl, may forage within the ruderal non-native grasslands (onsite), that the native and non-native trees within the site are too small to provide nesting habitat for these species, and no nests have been observed to date. However, project implementation could impact nesting raptors or other protected migratory birds in the project vicinity, which are protected under the Migratory Bird Treaty Act, due to construction activities such as tree and vegetation removal, ground disturbances, heavy equipment use. According to the California Department of Fish and Wildlife (CDFW) Code 3503, "take" of the nest or eggs of any bird is prohibited, except upon approval from the California Department of Fish and Wildlife. Disturbance of active nests can be avoided during construction through appropriate measures. Impacts would be anticipated to be **less than significant** with adherence to General Plan Policies and the following mitigation measures:

BIO-1: If project-related activities are scheduled during the nesting season (typically February 1 to September 30), a focused survey for nests shall be conducted by a qualified biologist within three (3) days prior to the beginning of project-related activities. The qualified biologist shall survey the area within a minimum 500-foot radius around the project area. If an active nest is found, a non-disturbance buffer shall be established around the nest. The width of the buffer shall be determined by the qualified biologist based on the species of bird, its general tolerance of disturbance, and the type of activity proposed. If a lapse in project-related work of seven (7) days or longer occurs, another focused survey shall be conducted.

Monitoring Requirement: The applicant shall conduct all construction activities outside the nesting season or perform a pre-construction survey and implement the avoidance measures determined by the qualified biologist prior to initiation of construction activities. This mitigation measure shall be noted on grading and construction plans. If a pre-construction survey is required, the applicant shall provide evidence of the survey to the Planning and Building Department to verify compliance prior to issuance of grading and building permits.

Monitoring Responsibility: El Dorado County Planning and Building Department.

b, c. **Riparian Habitat and Wetlands:** Using the methodologies described in the 1987 Wetland Delineation Manual, Marcus H. Bole & Associates found no federal jurisdictional wetland habitats within the boundaries of the proposed site development. There would be **no impact** to riparian habitat or wetlands.

d. **Migration Corridors:** The biological assessment found that the project would not substantially interfere with the movement of any native resident or migratory fish or wildlife species or with any established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites. The project is not within a County-designated IBC. The project has the potential to impact nesting raptors and other migratory birds and that was discussed earlier in Section "a" above. As conditioned, mitigated (BIO-1), and with adherence to County Code, impacts would be anticipated to be **less than significant**.

e. **Local Policies:** EI Dorado County Code and General Plan Policies pertaining to the protection of biological resources would include protection of rare plants, setbacks to riparian areas, and mitigation of impacted oak woodlands. Rare plants were discussed above in the Special Status Species section. Policy 7.4.4.4 of the General Plan establishes the native oak tree canopy retention and replacement standards. Impacts to oak woodlands have been addressed in the El Dorado County General Plan EIR, available for review online at https://www.edcgov.us/Government/planning/pages/final_environmental_impact_report_%28eir%29.aspx or at El Dorado County Planning Services offices located at 2850 Fairlane Court, Placerville, CA, 95667. Mitigation in the form of General Plan policies has been developed to mitigate impacts to less than significant levels. The County's oak resources reporting and impact mitigation requirements are outlined in El Dorado County's Oak Resources Management Plan (ORMP) and codified in County Ordinance No. 5061. Adherence to the ORMP would mitigate impacts to oak woodland to **less than significant**.

An Oak Resources Technical Report was prepared for the project site (Dudek 2020b). The property contains eleven (11) native oak and pine trees concentrated along the eastern boundary and the northwest corner. The site contains eight (8) Individual Native Oak Trees, one (1) of which is classified as a Heritage Tree. No Oak Woodlands were mapped on the project site. A summary is provided in Table 4-1.

Table 4-1

Individual Tree Data – DR19-0006/Cool Dollar General Project Site

Tree ID[1]	Botanical Name	Common Name	Total Trunk Diameter (in.)	Individual Native Oak Tree	Heritage Tree	Retain
1	*Quercus douglasii*	Blue oak	21	Yes	No	No[2]
2	*Quercus douglasii*	Blue oak	19	Yes	No	Yes
3	*Quercus wislizeni*	Interior live oak	40	Yes	Yes	No
4	*Pinus sabiniana*	Gray pine	17	No	No	No
5	*Quercus douglasii*	Blue oak	15	Yes	No	No
6	*Quercus douglasii*	Blue oak	21	Yes	No	No
7	*Quercus wislizeni*	Interior live oak	27	Yes	No	No
8	*Pinus sabiniana*	Gray pine	16	No	No	No
11	*Quercus douglasii*	Blue oak	20	Yes	No	No
12	*Pinus sabiniana*	Gray pine	7	No	No	No
13	*Quercus wislizeni*	Interior live oak	24	Yes	No	No

Notes: 1. Trees #9 and 10 included in the project's Revised Biological Assessment are located off-site and are not included in this report.
2. The project's grading plan identifies that Tree #1 will be retained; however, grading activity will disturb approximately 50% of this tree's root area. Post-construction survival of Tree #1 with this level of root disturbance is unlikely, therefore, it has been identifies as an impact for the purposes of this report.

As presented in Table 4-1, a total of seven (7) Individual Native Oak Trees will require removal, which includes one (1) Heritage Tree (Tree #3). The project is not exempt from mitigation requirements and does not qualify for mitigation reductions, as outlined in County Ordinance 5061, Section 130.39.050. Mitigation for Individual Native Oak Tree and Heritage Tree impacts is therefore required, as outlined in County Ordinance 5061, Section 130.39.070(C)(2). As outlined, mitigation shall be reached according to the following options:

- In-lieu fee payment of $37,944. This is calculated based on an in-lieu fee of $153/diameter inch for removed Individual Native Oak Trees (128 total inches) plus $459/diameter inch for removed Heritage Trees (40 total inches).

- Off-site replacement planting consistent with Section 2 of the County's ORMP within an area subject to a Conservation Easement or acquisition in fee title by a land conservation organization. Replacement sizes and quantities shall be consistent with Table 4 in the ORMP. Based on a review

of the project site and proposed development plan, the site is not large enough to accommodate on-site replacement trees. A Replacement Planting Plan shall be prepared, consistent with Section 2.4 of the ORMP, if this mitigation option is selected.

In addition to the mitigation requirements listed above, it is recommended that the tree protection recommendations outlined in Attachment C of the Oak Resources Technical Report be implemented to minimize construction-related impacts to retained Tree #2.

f. **Adopted Habitat Conservation Plans**: This project would not conflict with the provisions of an adopted Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. There would be **no impact**.

FINDING: No riparian habitat, sensitive naturally communities, or federally protected wetlands were identified on the project site and the proposed project would not conflict with the provisions of a Natural Community conservation plan or other habitat conservation plan. It is anticipated that mitigation measures would avoid any potential impacts to nesting raptors or migratory birds, and that compliance with the ORMP would mitigate impacts to protected oak trees on the project site; however, these topics will be further analyzed in the EIR.

V. CULTURAL RESOURCES. *Would the project:*				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?			**X**	
b. Cause a substantial adverse change in the significance of archaeological resource pursuant to Section 15064.5?			**X**	
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			**X**	
d. Disturb any human remains, including those interred outside of formal cemeteries?			**X**	

Regulatory Setting:

Federal Laws, Regulations, and Policies

The National Register of Historic Places

The National Register of Historic Places (NRHP) is the nation's master inventory of known historic resources. The NRHP is administered by the National Park Service and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level. The criteria for listing in the NRHP include resources that:

A. Are associated with events that have made a significant contribution to the broad patterns of history (events);
B. Are associated with the lives of persons significant in our past (persons);
C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction (architecture); or
D. Have yielded or may likely yield information important in prehistory or history (information potential).

State Laws, Regulations, and Policies

California Register of Historical Resources

Public Resources Code Section 5024.1 establishes the CRHR. The register lists all California properties considered to be significant historical resources. The CRHR includes all properties listed as or determined to be eligible for listing in the National Register of Historic Places (NRHP), including properties evaluated under Section 106 of the National Historic Preservation Act. The criteria for listing are similar to those of the NRHP. Criteria for listing in the CRHR include resources that:

1. Are associated with the events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Are associated with the lives of persons important in our past;
3. Embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possess high artistic values; or
4. Have yielded, or may be likely to yield, information important in prehistory or history.

The regulations set forth the criteria for eligibility as well as guidelines for assessing historical integrity and resources that have special considerations.

The California Register of Historic Places

The California Register of Historic Places (CRHP) program encourages public recognition and protection of resources of architectural, historical, archeological and cultural significance, identifies historical resources for state and local planning purposes, determines eligibility for state historic preservation grant funding and affords certain protections under the California Environmental Quality Act. The criteria for listing in the CRHP include resources that:

A. Are associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.
B. Are associated with the lives of persons important to local, California or national history.
C. Embody the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values.
D. Have yielded, or have the potential to yield, information important to the prehistory or history of the local area, California or the nation.

The State Office of Historic Preservation sponsors the California Historical Resources Information System (CHRIS), a statewide system for managing information on the full range of historical resources identified in California. CHRIS provides an integrated database of site-specific archaeological and historical resources information. The State Office of Historic Preservation also maintains the California Register of Historical Resources (CRHR), which identifies the State's architectural, historical, archeological and cultural resources. The CRHR includes properties listed in or formally determined eligible for the National Register and lists selected California Registered Historical Landmarks.

Public Resources Code (Section 5024.1[B]) states that any agency proposing a project that could potentially impact a resource listed on the CRHR must first notify the State Historic Preservation Officer, and must work with the officer to ensure that the project incorporates "prudent and feasible measures that will eliminate or mitigate the adverse effects."

California Health and Safety Code Section 7050.5 requires that, in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.

Section 5097.98 of the California Public Resources Code stipulates that whenever the commission receives notification of a discovery of Native American human remains from a county coroner pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, it shall immediately notify those persons it believes to be most likely descended from the deceased Native American. The decedents may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The descendants shall complete their inspection and make their recommendation within 24 hours of their notification by the Native American Heritage Commission. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

CEQA and CEQA Guidelines

Section 21083.2 of CEQA requires that the lead agency determine whether a project may have a significant effect on unique archaeological resources. A unique archaeological resource is defined in CEQA as an archaeological artifact, object, or site about which it can be clearly demonstrated that there is a high probability that it:

- Contains information needed to answer important scientific research questions, and there is demonstrable public interest in that information;
- Has a special or particular quality, such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.
- Although not specifically inclusive of paleontological resources, these criteria may also help to define "a unique paleontological resource or site."

Measures to avoid, conserve, preserve, or mitigate significant effects on these resources are also provided under CEQA Section 21083.2.

Section 15064.5 of the CEQA Guidelines notes that "a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." Substantial adverse changes include physical changes to the historic resource or to its immediate surroundings, such that the significance of the historic resource would be materially impaired. Lead agencies are expected to identify potentially feasible measures to mitigate significant adverse changes in the significance of a historic resource before they approve such projects. Historic resources are those that are:

- listed in, or determined to be eligible for listing in, the California Register of Historical Resources (CRHR) (Public Resources Code Section 5024.1[k]);
- included in a local register of historic resources (Public Resources Code Section 5020.1) or identified as significant in an historic resource survey meeting the requirements of Public Resources Code Section 5024.1(g); or
- determined by a lead agency to be historically significant.

CEQA Guidelines Section 15064.5 also prescribes the processes and procedures found under Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.95 for addressing the existence of, or probable likelihood of, Native American human remains, as well as the unexpected discovery of any human remains within the project site. This includes consultation with the appropriate Native American tribes.

CEQA Guidelines Section 15126.4 provides further guidance about minimizing effects to historical resources through the application of mitigation measures. Mitigation measures must be legally binding and fully enforceable.

The lead agency having jurisdiction over a project is also responsible to ensure that paleontological resources are protected in compliance with CEQA and other applicable statutes. Paleontological and historical resource management is also addressed in Public Resources Code Section 5097.5, "Archaeological, Paleontological, and Historical Sites." This statute defines as a misdemeanor any unauthorized disturbance or removal of a fossil site or remains on public

land and specifies that state agencies may undertake surveys, excavations, or other operations as necessary on state lands to preserve or record paleontological resources. This statute would apply to any construction or other related project impacts that would occur on state-owned or state-managed lands. The County General Plan contains policies describing specific, enforceable measures to protect cultural resources and the treatment of resources when found.

Discussion: In general, significant impacts are those that diminish the integrity, research potential, or other characteristics that make a historical or cultural resource significant or important. A substantial adverse effect on Cultural Resources would occur if the implementation of the project would:

- Disrupt, alter, or adversely affect a prehistoric or historic archaeological site or property that is historically or culturally significant to a community or ethnic or social group; or a paleontological site except as a part of a scientific study;
- Affect a landmark of cultural/historical importance;
- Conflict with established recreational, educational, religious or scientific uses of the area; or
- Conflict with adopted environmental plans and goals of the community where it is located.

a. **Historic, Archeological Resources, Paleontological Resources, Human Remains:** A Cultural Resources Inventory Survey was prepared for the project by Sean Michael Jensen, M.A. (June 2019). The report documented results of a records search of the North Central Information Center (NCIC), an intensive pedestrian survey of the project site, and consultation with the Native American Heritage Commission (NAHC).

The NCIC records search, which was conducted on May 22, 2019 (NCIC File No. ELD-19-56), indicated that approximately 90 percent of the identified Area of Potential Effect (consisting of the project site plus a .25-mile radius) had been subjected to previous archaeological investigation, and that aside from a mapping error, no prehistoric or historic-era sites had been documented within the APE.

The intensive-level pedestrian survey of the APE, undertaken on May 30, 2019, failed to identify any evidence of prehistoric or historic-era use or occupation within the APE. As noted in the Cultural Resources Inventory report, the absence of such materials might best be explained by the extensive disturbance to which most of the property has been subjected. The report concluded that no historic properties are present within the project area and no historic properties would be affected by development of the project, as presently proposed. Likewise, no significant historical resources, or unique archaeological resources are located within the APE. Project impacts would be **less than significant**.

Consultation was undertaken with the Native American Heritage Commission (NAHC) regarding sacred land listings for the property. An information request letter was delivered to the NAHC on May 16, 2019. With no response, a second request letter was submitted to the NAHC on May 28, 2019. To date, no response has been received from the NAHC.

b. Based on the absence of significant historical resources/unique archaeological resources/historic properties within the APE, the report recommends archaeological clearance for the project as presently proposed. Standard conditions of approval imposed by the County on the project would address the accidental discovery of any previously unidentified resources during construction and result in project impacts that are **less than significant**.

c. Neither the cultural resources report nor the geotechnical investigation prepared for the project site (Earth Strata 2019) indicate a high potential for paleontological or unique geologic resources. This impact would be **less than significant**.

d. The Cultural Resources Inventory prepared for the project, which included a records search and an intensive pedestrian survey of the site, did not find evidence of potential human remains. In the unlikely event that human remains are discovered during construction, the County's standard conditions of approval requiring compliance with CEQA Guidelines Section 15064.5(e) would result in project impacts that are **less than significant**.

FINDING: No significant cultural resources have been identified on the project site; however, cultural resources could be encountered during ground disturbing construction activities. This topic will be further analyzed in the EIR.

VI. ENERGY. *Would the project:*				
Would the proposal:	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Result in potential significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			**X**	
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			**X**	

Impact Discussion:

a. **Energy Consumption:** The short-term construction and long-term operation of the project will require the consumption of energy resources in several forms at the project site and within the project area. Construction and operational energy consumption is evaluated in detail below.

Electricity

Construction Use

Temporary electric power for as-necessary lighting and electronic equipment such as computers inside temporary construction trailers would be provided by Pacific Gas & Electric (PG&E). The electricity used for such activities would be temporary and minor.

Operational Use

The operational phase would require electricity for multiple purposes including building heating and cooling, lighting, appliances, electronics, and for water and wastewater treatment and conveyance. The estimation of operational building energy and water and wastewater was based on the CalEEMod default assumptions for a free-standing discount store and parking lot. Table 6-1 presents the electricity demand for the project.

Table 6-1

Project Operations - Electricity Demand

Project Facility	kWh/Year
Building and Lighting Electricity Demand	
Free Standing Discount Store	123,032.00
Parking Lot	4,340.00
Water/Wastewater Electricity Demand	
Free Standing Discount Store	5,093.31
Total	**132,465.31**

Source: Dudek 2020a.

Notes: kWh = kilowatt-hour.

For disclosure, in comparison, for El Dorado County, electricity demand in 2018 was 1,219 million kWh (CEC 2018a). The project is subject to statewide mandatory energy requirements as outlined in Title 24, Part 6, of the California Code of Regulations. Title 24, Part 11, contains additional energy measures that are applicable to project under California Green Building Standards Code (CALGreen). Prior to project approval, the applicant would ensure that the project would meet Title 24 requirements applicable at that time, as required by state regulations through their plan review process. Therefore, due to the limited amount of electricity use for the project compared to El Dorado County consumption, and the inherent increase in efficiency of building code regulations, the project would not result in a wasteful use of energy. Impacts related to operational electricity use would be less than significant.

Natural Gas

Construction Use

Natural gas is not anticipated to be required during construction of the proposed project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed below under the "petroleum" subsection. Any minor amounts of natural gas that may be consumed as a result of project construction would have a negligible contribution to the project's overall energy consumption.

Operational Use

The project does not include the use of natural gas. No natural gas service connection is proposed. Natural gas is typically used in retail commercial buildings for uses including building heating and cooling. Conservatively, default natural gas generation rates in CalEEMod for the project land use and climate zone were used, as shown in Table 6-2.

Table 6-2

Typical Natural Gas Demand

Project Facility	kBtu/year
Free Standing Discount Store	65,611.00

Source: Dudek 2020a.
Notes: kBtu = thousand British thermal units.

As shown in Table 6-2, if the project were to use natural gas, it would consume approximately 65,611 thousand British thermal units (kBtu) per year. For disclosure, in comparison, in 2018, PG&E delivered approximately 32 million therms (3.2 billion kBtu) to El Dorado County (CEC 2018b). The project would also be built in accordance with the current Title 24 standards at the time of construction and CALGreen. Therefore, due to the limited amount of natural gas use for the project, and the inherent increase in efficiency of building code regulations, the project would not result in a wasteful use of energy. Impacts related to operational natural gas use would be less than significant.

Petroleum

Construction Use

Heavy-duty construction equipment associated with construction activities would rely on diesel fuel, as would haul and vendor trucks involved in the soil export from, and delivery of materials to, the project site. Construction workers would travel to and from the project site throughout the duration of construction. It is assumed in this analysis that construction workers would travel to and from the site in gasoline-powered light-duty vehicles.

Heavy-duty construction equipment of various types would be used during each phase of project construction. The assumed equipment usage for each phase of construction are presented in the CalEEMod and energy usage documentation (Dudek 2020a). The project's construction equipment is estimated to operate a total combined 6,032 hours based on CalEEMod defaults assumptions.

Fuel consumption from construction equipment was estimated by converting the total carbon dioxide (CO_2) emissions from each construction phase to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. The conversion factor for gasoline is 8.78 kilograms per metric ton CO_2 per gallon, and the conversion factor for diesel is 10.21 kilograms per metric ton CO_2 per gallon (The Climate Registry 2019). The estimated diesel fuel usage from construction equipment is shown in Table 6-3.

Table 6-3

Construction Equipment Diesel Demand

Phase	Pieces of Equipment	Equipment CO_2 (MT)	Kg CO_2/Gallon	Gallons
Site Preparation	3	1.51	10.21	148.16
Grading	3	6.19	10.21	606.74
Building Construction	7	100.76	10.21	9,868.44
Paving	5	3.53	10.21	345.69
Architectural Coating	1	0.77	10.21	75.02
			Total	**11,044.05**

Sources: Pieces of equipment and equipment CO_2 (Dudek 2020a); kg CO_2/Gallon (The Climate Registry 2019).
Notes: CO_2 = carbon dioxide; MT = metric ton; kg = kilogram.

Estimates for worker vehicles, haul truck, and vendor truck fuel consumption are provided in Table 6-4.

Table 6-4

Construction Worker, Vendor, and Haul Truck Petroleum Demand

Phase	Trips	Vehicle MT CO_2	Kg CO_2/ Gallon	Gallons
Worker Vehicles (Gasoline)				
Site Preparation	16	0.09	8.78	9.89
Grading	80	0.43	8.78	49.43
Building Construction	888	4.77	8.78	542.84
Paving	78	0.41	8.78	46.56
Architectural Coating	12	0.06	8.78	7.16
			Total	**655.88**
Haul Trucks (Diesel)				
Site Preparation	0	0.00	10.21	0.00
Grading	50	1.94	10.21	189.94
Building Construction	0	0.00	10.21	0.00
Paving	0	0.00	10.21	0.00
Architectural Coating	0	0.00	10.21	0.00
			Total	**189.94**
Vendor Trucks (Diesel)				
Site Preparation	0	0.00	10.21	0.00
Grading	0	0.00	10.21	0.00
Building Construction	444	5.18	10.21	506.91
Paving	0	0.00	10.21	0.00

Table 6-4

Construction Worker, Vendor, and Haul Truck Petroleum Demand

Phase	Trips	Vehicle MT CO_2	Kg CO_2/ Gallon	Gallons
Architectural Coating	0	0.00	10.21	0.00
			Total	**506.91**

Sources: Trips and vehicle CO_2 (Dudek 2020a); kg CO_2/Gallon (The Climate Registry 2019).
Notes: MT = metric ton; CO_2 = carbon dioxide; kg = kilogram.

In summary, construction of the project is conservatively anticipated to consume 12,397 gallons of petroleum over a period of approximately 135 days. For disclosure, by comparison, approximately 11 billion gallons of petroleum would be consumed in California over the course of the project's construction phase, based on the California daily petroleum consumption estimate of approximately 78.6 million gallons per day (EIA 2019). Overall, because petroleum use during construction would be temporary, and would not be wasteful or inefficient, impacts would be less than significant.

Operational Use

The fuel consumption resulting from the project's operational phase would be attributable to employees and customers traveling to and from the project site. Petroleum fuel consumption associated with motor vehicles during operation is a function of vehicle miles traveled (VMT). As shown in the CalEEMod and energy usage documentation (Dudek 2020a), the annual VMT attributable to the project is expected to be 1,094,327 VMT per year, based on CalEEMod defaults for a rural 9,100 square-foot free standing discount store and accounting for 34% pass-by trips per the TIA. Similar to construction worker and truck trips, fuel consumption for operation was estimated by converting the total CO_2 emissions to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. Based on the countywide proportion of gasoline and diesel on-road vehicle-generated CO_2 in EMFAC2014 and the CalEEMod default fleet mix, the vehicles associated with project operations were assumed to be approximately 94% gasoline powered and 6% diesel powered. The estimated fuel use from project operational mobile sources is shown in Table 6-5.

Table 6-5

Project Operations - Petroleum Consumption

Fuel	Vehicle MT CO_2	kg CO_2/Gallon[a]	Gallons
Gasoline	392.43	8.78	44,696.00
Diesel	24.96	10.21	2,444.95
		Total	**47,140.95**

Source: Dudek 2020a.
Notes: MT = metric ton; CO_2 = carbon dioxide; kg = kilogram.

As depicted in Table 6-5, mobile sources from the project would result in approximately 47,141 gallons of petroleum fuel usage per year. By comparison, California as a whole consumes approximately 28.7 billion gallons of petroleum per year (EIA 2019). Notably, over the lifetime of the project, the fuel efficiency of the vehicles being used by the employees and customers is expected to increase based on numerous regulations in place that require and encourage increased fuel efficiency. As such, the amount of petroleum consumed as a result of vehicular trips to and from the project site during operation would decrease over time. Although the project would increase petroleum use during operation as a result of employees and customers traveling to and from the project site, the use would be a small fraction of the statewide use and, due to efficiency increases, would diminish over time. Given these considerations, petroleum consumption associated with the project would not be considered inefficient or wasteful and would result in a less-than-significant impact.

Based on the analysis above, the consumption of energy resources (including electricity, natural gas, and petroleum) during project construction and operation would not be considered inefficient or wasteful. Project impacts would be **less than significant**.

b. **Energy Plans and Efficiency Standards:** Part 6 of Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. Part 6 establishes energy efficiency standards for residential and non-residential buildings constructed in California to reduce energy demand and consumption. Part 6 is updated periodically (every 3 years) to incorporate and consider new energy efficiency technologies and methodologies. Title 24 also includes Part 11, CALGreen. CALGreen institutes mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and state-owned buildings, as well as schools and hospitals. The proposed project would meet Title 24 and CALGreen standards to reduce energy demand and increase energy efficiency. Overall, the project would not conflict with existing energy standards and regulations; therefore, impacts during construction and operation of the project would be **less than significant**.

Mitigation Measures: None Required.

FINDING: It is anticipated that the project would not result in wasteful, inefficient, or unnecessary consumption of energy resources or conflict with or obstruct any state or local plans for renewable energy or energy efficiency; however, this topic will be further analyzed in the EIR.

VII. GEOLOGY AND SOILS. *Would the project:*	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				**X**
ii) Strong seismic ground shaking?			**X**	
iii) Seismic-related ground failure, including liquefaction?				**X**
iv) Landslides?				**X**
b. Result in substantial soil erosion or the loss of topsoil?			**X**	
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			**X**	
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) creating substantial risks to life or property?			**X**	
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?			**X**	

Regulatory Setting:

Federal Laws, Regulations, and Policies

National Earthquake Hazards Reduction Act

The National Earthquake Hazards Reduction Act of 1977 (Public Law 95-124) and creation of the National Earthquake Hazards Reduction Program (NEHRP) established a long-term earthquake risk-reduction program to better understand, predict, and mitigate risks associated with seismic events. The following four federal agencies are responsible for coordinating activities under NEHRP: USGS, National Science Foundation (NSF), Federal Emergency Management Agency (FEMA), and National Institute of Standards and Technology (NIST). Since its inception, NEHRP has shifted its focus from earthquake prediction to hazard reduction. The current program objectives (NEHRP 2009) are to:

1. Develop effective measures to reduce earthquake hazards;
2. Promote the adoption of earthquake hazard reduction activities by federal, state, and local governments; national building standards and model building code organizations; engineers; architects; building owners; and others who play a role in planning and constructing buildings, bridges, structures, and critical infrastructure or "lifelines";
3. Improve the basic understanding of earthquakes and their effects on people and infrastructure through interdisciplinary research involving engineering; natural sciences; and social, economic, and decision sciences; and
4. Develop and maintain the USGS seismic monitoring system (Advanced National Seismic System); the NSF-funded project aimed at improving materials, designs, and construction techniques (George E. Brown Jr. Network for Earthquake Engineering Simulation); and the global earthquake monitoring network (Global Seismic Network).

Implementation of NEHRP objectives is accomplished primarily through original research, publications, and recommendations and guidelines for state, regional, and local agencies in the development of plans and policies to promote safety and emergency planning.

State Laws, Regulations, and Policies

Alquist–Priolo Earthquake Fault Zoning Act

The Alquist–Priolo Earthquake Fault Zoning Act (Public Resources Code Section 2621 *et seq*.) was passed to reduce the risk to life and property from surface faulting in California. The Alquist–Priolo Act prohibits construction of most types of structures intended for human occupancy on the surface traces of active faults and strictly regulates construction in the corridors along active faults (earthquake fault zones). It also defines criteria for identifying active faults, giving legal weight to terms such as "active," and establishes a process for reviewing building proposals in and adjacent to earthquake fault zones. Under the Alquist-Priolo Act, faults are zoned and construction along or across them is strictly regulated if they are "sufficiently active" and "well defined." Before a project can be permitted, cities and counties are required to have a geologic investigation conducted to demonstrate that the proposed buildings would not be constructed across active faults.

Historical seismic activity and fault and seismic hazards mapping in the project vicinity indicate that the area has relatively low potential for seismic activity (El Dorado County 2003). No active faults have been mapped in the project area, and none of the known faults have been designated as an Alquist-Priolo Earthquake Fault Zone.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (Public Resources Code Sections 2690–2699.6) establishes statewide minimum public safety standards for mitigation of earthquake hazards. While the Alquist–Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong ground

shaking, liquefaction, and seismically induced landslides. Its provisions are similar in concept to those of the Alquist–Priolo Act. The state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other seismic hazards, and cities and counties are required to regulate development within mapped seismic hazard zones. In addition, the act addresses not only seismically induced hazards but also expansive soils, settlement, and slope stability.

Mapping and other information generated pursuant to the SHMA is to be made available to local governments for planning and development purposes. The State requires: (1) local governments to incorporate site-specific geotechnical hazard investigations and associated hazard mitigation, as part of the local construction permit approval process; and (2) the agent for a property seller or the seller if acting without an agent, must disclose to any prospective buyer if the property is located within a Seismic Hazard Zone. Under the Seismic Hazards Mapping Act, cities and counties may withhold the development permits for a site within seismic hazard zones until appropriate site-specific geologic and/or geotechnical investigations have been carried out and measures to reduce potential damage have been incorporated into the development plans.

California Building Standards Code

Title 24 CCR, also known as the California Building Standards Code (CBC), specifies standards for geologic and seismic hazards other than surface faulting. These codes are administered and updated by the California Building Standards Commission. CBC specifies criteria for open excavation, seismic design, and load-bearing capacity directly related to construction in California.

Discussion: A substantial adverse effect on Geologic Resources would occur if the implementation of the project would:

- Allow substantial development of structures or features in areas susceptible to seismically induced hazards such as groundshaking, liquefaction, seiche, and/or slope failure where the risk to people and property resulting from earthquakes could not be reduced through engineering and construction measures in accordance with regulations, codes, and professional standards;
- Allow substantial development in areas subject to landslides, slope failure, erosion, subsidence, settlement, and/or expansive soils where the risk to people and property resulting from such geologic hazards could not be reduced through engineering and construction measures in accordance with regulations, codes, and professional standards; or
- Allow substantial grading and construction activities in areas of known soil instability, steep slopes, or shallow depth to bedrock where such activities could result in accelerated erosion and sedimentation or exposure of people, property, and/or wildlife to hazardous conditions (e.g., blasting) that could not be mitigated through engineering and construction measures in accordance with regulations, codes, and professional standards.
-

a. **Seismic Hazards:**

i) According to the California Department of Conservation Division of Mines and Geology, there are no Alquist-Priolo fault zones within El Dorado County (DOC, 2007). The nearest such faults are located in Alpine and Butte Counties. There would be **no impact**.

ii) The potential for seismic ground shaking in the project area would be considered remote for the reason stated in Section i) above. Any potential impacts due to seismic impacts would be addressed through compliance with the Uniform Building Code (UBC). All structures would be built to meet the construction standards of the UBC for the appropriate seismic zone. Project impacts would be **less than significant**.

iii) El Dorado County is considered an area with low potential for seismic activity. There are no landslide, liquefaction, or fault zones (DOC, 2007). There would be **no impact**.

iv) All grading activities onsite would be required to comply with the El Dorado County Grading, Erosion Control and Sediment Ordinance. There would be **no impact**.

b. **Soil Erosion:** For development proposals, all grading activities onsite would comply with the El Dorado County Grading, Erosion and Sediment Control Ordinance including the implementation of pre- and post-construction Best Management Practices (BMPs). Implemented BMPs are required to be consistent with the County's California Stormwater Pollution Prevention Plan (SWPPP) issued by the State Water Resources Control Board to eliminate run-off and erosion and sediment controls. Any grading activities exceeding 250 cubic yards of graded material or grading completed for the purpose of supporting a structure must meet the provisions contained in the County of El Dorado Grading, Erosion, and Sediment Control Ordinance. Project impacts would be **less than significant**.

c. **Geologic Hazards:** A Geotechnical Report prepared for the project site (Earth Strata Geotechnical Services, Inc. 2019) found that potential risks related to on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse would be low. All grading activities would comply with the El Dorado County Grading, Erosion Control and Sediment Ordinance. Project impacts would be **less than significant**.

d. **Expansive Soils:** Expansive soils are those that greatly increase in volume when they absorb water and shrink when they dry out. When buildings are placed on expansive soils, foundations may rise each wet season and fall each dry season. This movement may result in cracking foundations, distortion of structures, and warping of doors and windows. The central portion of the county has a moderate expansiveness rating while the eastern and western portions have a low rating. This impact would be **less than significant**.

e. **Septic Capability:** A review of the project site by County Environmental Health Management found that there is 7 feet of available soil depth for the leech field. The proposed treatment septic system must meet NSF standards and is subject to County permitting requirements. The proposed system JET J-1000 is NSF certified. This impact would be **less than significant**.

FINDING: A review of the soils and geologic conditions on the project site determined that the project would not result in substantial adverse effects related to the rupture of a known earthquake fault, seismic-related ground failure, or landslides. It is anticipated that impacts related to soil erosion, strong seismic ground shaking, expansive or unstable soils, and septic systems would be addressed by compliance with the El Dorado County Grading, Erosion Control and Sediment Ordinance and the Uniform Building Code; however, these topics will be further analyzed in the EIR.

VIII. GREENHOUSE GAS EMISSIONS. *Would the project:*	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			**X**	
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			**X**	

Introduction:

Cumulative greenhouse gases (GHG) emissions are believed to contribute to an increased greenhouse effect and global climate change, which may result in sea level rise, changes in precipitation, habitat, temperature, wildfires, air pollution levels, and changes in the frequency and intensity of weather-related events. While criteria air pollutants and TACs are pollutants of regional and local concern (see Section III. Air Quality above); GHG are global pollutants. The primary land-use related GHG are carbon dioxide (CO_2), methane (CH_4) and nitrous oxides (N_2O). The individual pollutant's ability to retain infrared radiation represents its "global warming potential" and is expressed in terms of CO_2 equivalents; therefore, CO_2 is the benchmark having a global warming potential of 1. CH_4 has a global warming potential of 25 and thus has a 25 times greater global warming effect per metric ton of CH_4 than CO_2. N_2O has a global

warming potential of 298. Emissions are expressed in annual metric tons of CO_2 equivalent units of measure (i.e., MT CO_2e per year). Other GHGs include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3). While these compounds have significantly higher global warming potentials (ranging in the thousands), these typically are not a concern in land-use development projects and are usually only used in specific industrial processes.

GHG Sources

The primary man-made source of CO_2 is the burning of fossil fuels; the two largest sources being coal burning to produce electricity and petroleum burning in combustion engines. The primary sources of man-made CH_4 are natural gas systems losses (during production, processing, storage, transmission and distribution), enteric fermentation (digestion from livestock) and landfill off-gassing. The primary source of man-made N_2O is agricultural soil management (fertilizers), with fossil fuel combustion a very distant second. In El Dorado County, the primary source of GHG is fossil fuel combustion mainly in the transportation sector (estimated at 70% of countywide GHG emissions). A distant second are residential sources (approximately 20%), and commercial/industrial sources are third (approximately 7%). The remaining sources are waste/landfill (approximately 3%) and agricultural (<1%) (EDCAQMD n.d.).

Regulatory Setting:

Federal Laws, Regulations, and Policies

At the federal level, USEPA has developed regulations to reduce GHG emissions from motor vehicles and has developed permitting requirements for large stationary emitters of GHGs. On April 1, 2010, USEPA and the National Highway Traffic Safety Administration (NHTSA) established a program to reduce GHG emissions and improve fuel economy standards for new model year 2012-2016 cars and light trucks. On August 9, 2011, USEPA and the NHTSA announced standards to reduce GHG emissions and improve fuel efficiency for heavy-duty trucks and buses.

State Laws, Regulations, and Policies

Executive Order (EO) S-3-05 (June 2005) established California's GHG emissions reduction targets and laid out responsibilities among the state agencies for implementing the EO and for reporting on progress toward the targets. This EO established the following targets:

- By 2010, reduce GHG emissions to 2000 levels
- By 2020, reduce GHG emissions to 1990 levels
- By 2050, reduce GHG emissions to 80% below 1990 levels

In September 2006, Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the *California Climate Solutions Act of 2006* (Stats. 2006, ch. 488) (Health & Safety Code, Section 38500 et seq.). AB 32 provided initial direction on creating a comprehensive multiyear program to limit California's GHG emissions at 1990 levels by 2020 and initiate the transformations required to achieve the state's long-range climate objectives. One specific requirement of AB 32 is for CARB to prepare a "scoping plan" for achieving the maximum technologically feasible and cost-effective GHG emission reductions by 2020 (Health and Safety Code, Section 38561(a)), and to update the plan at least once every 5 years.

EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under EO S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing GHG emissions to 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80% below 1990 levels by 2050 as set forth in EO S-3-05. Senate Bill (SB) 32 was adopted in 2016, which codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030.

In June 2008, the California Governor's Office of Planning and Research's (OPR) issued a Technical Advisory (OPR 2008) providing interim guidance regarding a proposed project's GHG emissions and contribution to global climate

change. In the absence of adopted local or statewide thresholds, OPR recommends the following approach for analyzing GHG emissions: Identify and quantify the project's GHG emissions, assess the significance of the impact on climate change; and if the impact is found to be significant, identify alternatives and/or Mitigation Measures that would reduce the impact to less than significant levels.

Discussion:

Impact Significance Criteria

CEQA does not provide clear direction on addressing climate change. It requires lead agencies identify project GHG emissions impacts and their "significance," but that statute and Guidelines do not set significance criteria for what constitutes a "significant" impact. GHG impacts are inherently cumulative, and since no single project could cause global climate change, the CEQA test is if impacts are "cumulatively considerable." Not all projects emitting GHG contribute significantly to climate change. CEQA authorizes reliance on previously approved plans (i.e., a Climate Action Plan (CAP), etc.) and mitigation programs adequately analyzing and mitigating GHG emissions to a less than significant level. "Tiering" from such a programmatic-level document is the preferred method to address GHG emissions. El Dorado County does not have an adopted CAP or similar program-level document; therefore, the project's GHG emissions must be addressed at the project-level.

Unlike thresholds of significance established for criteria air pollutants in EDCAQMD's *Guide to Air Quality Assessment*, the EDCAQMD has not adopted GHG emissions thresholds for land use development projects. In the absence of County adopted thresholds, EDCAQMD recommends using the adopted thresholds of other lead agencies which are based on consistency with the goals of AB 32. Projects exceeding these thresholds would have a potentially significant impact and be required to mitigate those impacts to a less than significant level. Until the County adopts a CAP consistent with CEQA Guidelines Section 15183.5, and/or establishes GHG thresholds, the County will follow an interim approach to evaluating GHG emissions utilizing significance criteria adopted by the San Luis Obispo Air Pollution Control District (SLOAPCD), as recommended by the EDCAQMD, to determine the significance of GHG emissions, based on substantial evidence (SLOACPD 2012). These are summarized below:

- The threshold for stationary sources is 10,000 MT CO_2e per year
- For nonstationary sources, the following two separate thresholds have been established:
    - 1,150 MT CO_2e per year
    - 4.9 MT CO2e per service population per year (Service population is the sum of residents plus employees expected for a development project.)

The quantitative threshold of 1,150 MT CO_2e annually adopted by SLOAPCD is applied to this analysis.

Impact Discussion:

a. **GHG Emissions:** The project would result in GHG emissions associated with short-term construction and long-term operations.

Construction

Construction of the proposed project would result in GHG emissions, which are primarily associated with use of off-road construction equipment, vendor and haul trucks, and worker vehicles. CalEEMod was used to calculate the annual GHG emissions. A detailed depiction of the construction schedule—including information regarding phasing, equipment utilized during each phase, trucks, and worker vehicles—is shown in the CalEEMod and energy usage documentation (Dudek 2020a). The estimated project-generated GHG emissions from construction activities are shown in Table 8-1.

Table 8-1

Estimated Annual Construction GHG Emissions

Year	CO2	CH4	N2O	CO2e
	metric tons per year			
2020	86.00	0.02	0.00	86.39
2021	39.63	0.01	0.00	39.80
Total Annual GHG Emissions				**126.19**
Amortized GHG Emissions				5.05

Notes: Dudek 2020a.
MT = metric tons; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent.

As shown in Table 3.8-1, estimated total annual construction GHG emissions would be approximately 126 MT CO_2e. Construction GHG emissions are a one-time release and, therefore, typically not expected to generate a significant contribution to global climate change. In order to present a worst-case scenario, the proposed project's construction-related GHG emissions have been amortized over 25 years (i.e., the lifetime of commercial projects per SLOACPD) and included with the operational GHG emissions.

Operation

Operation of the project would generate GHG emissions through motor vehicle trips to and from the project site; landscape maintenance equipment operation; energy use (generation of electricity consumed by the project); solid waste disposal; and generation of electricity associated with water supply, treatment, and distribution and wastewater treatment. As discussed in the transportation section, it is expected that most of the trips would replace existing longer trips to retail establishments. The estimated project-generated GHG emissions from operational activities were estimated using CalEEMod and are shown in Table 8-2.

Table 8-2

Estimated Annual Operational GHG Emissions

Year	CO2	CH4	N2O	CO2e
	metric tons per year			
Area	<0.01	0.00	0.00	<0.01
Energy	15.63	<0.01	<0.01	15.80
Waste	417.39	0.01	0.00	417.76
Water/Wastewater	0.47	0.47	0.00	19.68
Maximum Annual Emissions				**457.71**
Amortized Construction Emissions				5.05
Total Operational + Amortized Construction GHGs				**462.76**

Notes: Dudek 2020a.
<0.01 = value less than reported 0.01 metric tons per year.
MT = metric tons; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent.

As shown in Table 8-2, estimated annual project-generated GHG emissions would be approximately 458 MT CO_2e per year as a result of project operations only. After summing the amortized project construction emissions, total GHGs generated by the project would be approximately 463 MT CO_2e per year. As such, annual operational GHG emissions with amortized construction emissions would not exceed the applied threshold of 1,150 MT CO_2e per year. Therefore, the project's GHG contribution would be **less than significant** and would not be cumulatively considerable.

b. **GHG Reduction Plans:** The CARB Scoping Plan, approved by CARB in 2008 and updated in 2014 and 2017, provides a framework for actions to reduce California's GHG emissions and requires CARB and other

state agencies to adopt regulations and other initiatives to reduce GHGs. The Scoping Plan is not directly applicable to specific projects, nor is it intended to be used for project-level evaluations.[2] Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-GWP GHGs in consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., Low Carbon Fuel Standard), among others. The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32 and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. To the extent that these regulations are applicable to the project or its uses, the project would comply with all regulations adopted in furtherance of the Scoping Plan to the extent required by law.

The project would also not impede the attainment of the GHG reduction goals for 2030 or 2050 identified in SB 32 and EO S-3-05, respectively. EO S-3-05 establishes the following goals: GHG emissions should be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050. SB 32 establishes for a statewide GHG emissions reduction target whereby CARB, in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions, shall ensure that statewide GHG emissions are reduced to at least 40% below 1990 levels by December 31, 2030. While there are no established protocols or thresholds of significance for that future year analysis; CARB forecasts that compliance with the current Scoping Plan puts the state on a trajectory of meeting these long-term GHG goals, although the specific path to compliance is unknown (CARB 2014).

CARB has expressed optimism with regard to both the 2030 and 2050 goals. It states in the First Update to the Climate Change Scoping Plan that "California is on track to meet the near-term 2020 GHG emissions limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32" (CARB 2014). With regard to the 2050 target for reducing GHG emissions to 80% below 1990 levels, the First Update states the following (CARB 2014):

> This level of reduction is achievable in California. In fact, if California realizes the expected benefits of existing policy goals (such as 12,000 megawatts of renewable distributed generation by 2020, net zero energy homes after 2020, existing building retrofits under AB 758, and others) it could reduce emissions by 2030 to levels squarely in line with those needed in the developed world and to stay on track to reduce emissions to 80% below 1990 levels by 2050. Additional measures, including locally driven measures and those necessary to meet federal air quality standards in 2032, could lead to even greater emission reductions.

In other words, CARB believes that the state is on a trajectory to meet the 2030 and 2050 GHG reduction targets set forth in AB 32, SB 32, and EO S-3-05. This is confirmed in the Second Update, which states (CARB 2017):

> The Proposed Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while also identifying new, technologically feasibility and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities. The Proposed Plan is developed to be consistent with requirements set forth in AB 32, SB 32, and AB 197.

The project would be consistent with the applicable strategies and measures in the Scoping Plan and is consistent with, and would not impede, the state's trajectory toward the above-described statewide GHG reduction goals for

[2] The Final Statement of Reasons for the amendments to the CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that "[t]he Scoping Plan may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009).

2030 or 2050. In addition, since the specific path to compliance for the state in regard to the long-term goals will likely require development of technology or other changes that are not currently known or available, specific additional mitigation measures for the project would be speculative and cannot be identified at this time. With respect to future GHG targets under SB 32 and EO S-3-05, CARB has also made clear its legal interpretation that it has the requisite authority to adopt whatever regulations are necessary, beyond the AB 32 horizon year of 2020, to meet SB 32's 40% reduction target by 2030 and EO S-3-05's 80% reduction target by 2050; this legal interpretation by an expert agency provides evidence that future regulations will be adopted to continue the state on its trajectory toward meeting these future GHG targets.

Based on the above considerations, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and no mitigation is required. This impact would be **less than significant**.

Mitigation Measures: None Required.

FINDING: It is anticipated that the project would result in less than significant impacts to GHG emissions; however, this topic will be further analyzed in the EIR.

IX. HAZARDS AND HAZARDOUS MATERIALS. *Would the project:*	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			**X**	
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			**X**	
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			**X**	
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				**X**
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				**X**
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				**X**
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			**X**	

IX. HAZARDS AND HAZARDOUS MATERIALS. *Would the project:*	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			**X**	

Regulatory Setting:

Hazardous materials and hazardous wastes are subject to extensive federal, state, and local regulations to protect public health and the environment. These regulations provide definitions of hazardous materials; establish reporting requirements; set guidelines for handling, storage, transport, and disposal of hazardous wastes; and require health and safety provisions for workers and the public. The major federal, state, and regional agencies enforcing these regulations are USEPA and the Occupational Safety and Health Administration (OSHA); California Department of Toxic Substances Control (DTSC); California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA); California Governor's Office of Emergency Services (Cal OES); and EDCAPCD.

Federal Laws, Regulations, and Policies

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, also called the Superfund Act; 42 USC Section 9601 *et seq.*) is intended to protect the public and the environment from the effects of past hazardous waste disposal activities and new hazardous material spills. Under CERCLA, USEPA has the authority to seek the parties responsible for hazardous materials releases and to ensure their cooperation in site remediation. CERCLA also provides federal funding (through the "Superfund") for the remediation of hazardous materials contamination. The Superfund Amendments and Reauthorization Act of 1986 (Public Law 99-499) amends some provisions of CERCLA and provides for a Community Right-to-Know program.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act of 1976 (RCRA; 42 USC Section 6901 *et seq.*), as amended by the Hazardous and Solid Waste Amendments of 1984, is the primary federal law for the regulation of solid waste and hazardous waste in the United States. These laws provide for the "cradle-to-grave" regulation of hazardous wastes, including generation, transportation, treatment, storage, and disposal. Any business, institution, or other entity that generates hazardous waste is required to identify and track its hazardous waste from the point of generation until it is recycled, reused, or disposed of.

USEPA has primary responsibility for implementing RCRA, but individual states are encouraged to seek authorization to implement some or all RCRA provisions. California received authority to implement the RCRA program in August 1992. DTSC is responsible for implementing the RCRA program in addition to California's own hazardous waste laws, which are collectively known as the Hazardous Waste Control Law.

Energy Policy Act of 2005

Title XV, Subtitle B of the Energy Policy Act of 2005 (the Underground Storage Tank Compliance Act of 2005) contains amendments to Subtitle I of the Solid Waste Disposal Act, the original legislation that created the

Underground Storage Tank (UST) Program. As defined by law, a UST is "any one or combination of tanks, including pipes connected thereto, that is used for the storage of hazardous substances and that is substantially or totally beneath the surface of the ground." In cooperation with USEPA, SWRCB oversees the UST Program. The intent is to protect public health and safety and the environment from releases of petroleum and other hazardous substances from tanks. The four primary program elements include leak prevention (implemented by Certified Unified Program Agencies [CUPAs], described in more detail below), cleanup of leaking tanks, enforcement of UST requirements, and tank integrity testing.

Spill Prevention, Control, and Countermeasure Rule

USEPA's Spill Prevention, Control, and Countermeasure (SPCC) Rule (40 CFR, Part 112) apply to facilities with a single above-ground storage tank (AST) with a storage capacity greater than 660 gallons, or multiple tanks with a combined capacity greater than 1,320 gallons. The rule includes requirements for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines. The rule requires specific facilities to prepare, amend, and implement SPCC Plans.

Occupational Safety and Health Administration

OSHA is responsible at the federal level for ensuring worker safety. OSHA sets federal standards for implementation of workplace training, exposure limits, and safety procedures for the handling of hazardous substances (as well as other hazards). OSHA also establishes criteria by which each state can implement its own health and safety program.

Code of Federal Regulations (14 CFR) Part 77

14 CFR Part 77.9 is designed to promote air safety and the efficient use of navigable airspace. Implementation of the code is administered by the Federal Aviation Administration (FAA). If an organization plans to sponsor any construction or alterations that might affect navigable airspace, a Notice of Proposed Construction or Alteration (FAA Form 7460-1) must be filed (if required). The code provides specific guidance regarding FAA notification requirements.

State Laws, Regulations, and Policies

Safe Drinking Water and Toxic Enforcement Act of 1986 – Proposition 65

The Safe Drinking Water and Toxic Enforcement Act of 1986, more commonly known as Proposition 65, protects the state's drinking water sources from contamination with chemicals known to cause cancer, birth defects, or other reproductive harm. Proposition 65 also requires businesses to inform the public of exposure to such chemicals in the products they purchase, in their homes or workplaces, or that are released into the environment. In accordance with Proposition 65, the California Governor's Office publishes, at least annually, a list of such chemicals. OEHHA, an agency under the California Environmental Protection Agency (CalEPA), is the lead agency for implementation of the Proposition 65 program. Proposition 65 is enforced through the California Attorney General's Office; however, district and city attorneys and any individual acting in the public interest may also file a lawsuit against a business alleged to be in violation of Proposition 65 regulations.

The Unified Program

The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency response programs. CalEPA and other state agencies set the standards for their programs, while local governments (CUPAs) implement the standards. For each county, the CUPA regulates/oversees the following:

- Hazardous materials business plans;
- California accidental release prevention plans or federal risk management plans;
- The operation of USTs and ASTs;
- Universal waste and hazardous waste generators and handlers;

- On-site hazardous waste treatment;
- Inspections, permitting, and enforcement;
- Proposition 65 reporting; and
- Emergency response.

Hazardous Materials Business Plans

Hazardous materials business plans are required for businesses that handle hazardous materials in quantities greater than or equal to 55 gallons of a liquid, 500 pounds of a solid, or 200 cubic feet (cf) of compressed gas, or extremely hazardous substances above the threshold planning quantity (40 CFR, Part 355, Dudek 2020a) (Cal OES, 2015). Business plans are required to include an inventory of the hazardous materials used/stored by the business, a site map, an emergency plan, and a training program for employees (Cal OES, 2015). In addition, business plan information is provided electronically to a statewide information management system, verified by the applicable CUPA, and transmitted to agencies responsible for the protection of public health and safety (i.e., local fire department, hazardous material response team, and local environmental regulatory groups) (Cal OES, 2015).

California Occupational Safety and Health Administration

Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations in California. Cal/OSHA regulations pertaining to the use of hazardous materials in the workplace (CCR Title 8) include requirements for safety training, availability of safety equipment, accident and illness prevention programs, warnings about exposure to hazardous substances, and preparation of emergency action and fire prevention plans.
Hazard communication program regulations that are enforced by Cal/OSHA require workplaces to maintain procedures for identifying and labeling hazardous substances, inform workers about the hazards associated with hazardous substances and their handling, and prepare health and safety plans to protect workers at hazardous waste sites. Employers must also make material safety data sheets available to employees and document employee information and training programs. In addition, Cal/OSHA has established maximum permissible RF radiation exposure limits for workers (Title 8 CCR Section 5085[b]), and requires warning signs where RF radiation might exceed the specified limits (Title 8 CCR Section 5085 [c]).

California Accidental Release Prevention

The purpose of the California Accidental Release Prevention (CalARP) program is to prevent accidental releases of substances that can cause serious harm to the public and the environment, to minimize the damage if releases do occur, and to satisfy community right-to-know laws. In accordance with this program, businesses that handle more than a threshold quantity of regulated substance are required to develop a risk management plan (RMP). This RMP must provide a detailed analysis of potential risk factors and associated mitigation measures that can be implemented to reduce accident potential. CUPAs implement the CalARP program through review of RMPs, facility inspections, and public access to information that is not confidential or a trade secret.

California Department of Forestry and Fire Protection Wildland Fire Management

The Office of the State Fire Marshal and the California Department of Forestry and Fire Protection (CAL FIRE) administer state policies regarding wildland fire safety. Construction contractors must comply with the following requirements in the Public Resources Code during construction activities at any sites with forest-, brush-, or grass-covered land:

- Earthmoving and portable equipment with internal combustion engines must be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (Public Resources Code Section 4442).
- Appropriate fire-suppression equipment must be maintained from April 1 to December 1, the highest-danger period for fires (Public Resources Code Section 4428).
- On days when a burning permit is required, flammable materials must be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor must maintain the appropriate fire suppression equipment (Public Resources Code Section 4427).

- On days when a burning permit is required, portable tools powered by gasoline fueled internal combustion engines must not be used within 25 feet of any flammable materials (Public Resources Code Section 4431).

California Highway Patrol

CHP, along with Caltrans, enforce and monitor hazardous materials and waste transportation laws and regulations in California. These agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roads. All motor carriers and drivers involved in transportation of hazardous materials must apply for and obtain a hazardous materials transportation license from CHP.

Local Laws, Regulations, and Policies

A map of the fuel loading in the County (General Plan Figure HS-1) shows the fire hazard severity classifications of the SRAs in El Dorado County, as established by CDF. The classification system provides three classes of fire hazards: Moderate, High, and Very High. Fire Hazard Ordinance (Chapter 8.08) requires defensible space as described by the State Public Resources Code, including the incorporation and maintenance of a 30-foot fire break or vegetation fuel clearance around structures in fire hazard zones. The County's requirements on emergency access, signing and numbering, and emergency water are more stringent than those required by state law (Patton 2002). The Fire Hazard Ordinance also establishes limits on campfires, fireworks, smoking, and incinerators for all discretionary and ministerial developments.

Discussion: A substantial adverse effect due to Hazards or Hazardous Materials would occur if implementation of the project would:

- Expose people and property to hazards associated with the use, storage, transport, and disposal of hazardous materials where the risk of such exposure could not be reduced through implementation of Federal, State, and local laws and regulations;
- Expose people and property to risks associated with wildland fires where such risks could not be reduced through implementation of proper fuel management techniques, buffers and landscape setbacks, structural design features, and emergency access; or
- Expose people to safety hazards as a result of former on-site mining operations.

a. **Hazardous Materials:** The project may involve transportation, use, and disposal of hazardous materials such as construction materials, paints, fuels, landscaping materials, and building cleaning supplies. The majority of the use of these hazardous materials would occur primarily during construction. Any uses of hazardous materials would be required to comply with all applicable federal, state, and local standards associated with the handling and storage of hazardous materials. Prior to any use of hazardous materials, the project would be required to obtain a Hazardous Materials Business Plan through the Environmental Management – Solid Waste and Hazardous Materials Division of El Dorado County. Commercial facilities that store reportable quantities of hazardous materials (55 gallons) or generate hazardous waste are also required to obtain a Hazardous Materials Business Plan through Environmental Management – Solid Waste and Hazardous Materials Division of EDC. However, Dollar General retail stores do not generate significant amounts of hazardous materials, and only a minimal amount of routine day-to-day materials is stored on-site, such as materials used in routine cleaning of the building or maintenance of landscaping. These materials would be used, stored, and disposed in accordance with existing regulations and product labeling and would not create a significant hazard to the public or to the environment. As such, impacts would be **less than significant**.

b. **Hazardous Conditions:** A Phase I Environmental Site Assessment was prepared for the project site (Bole & Associates 2019b). The assessment did not identify any recognized environmental conditions at the project site that could result in exposure to hazards through project construction or operations. Project impacts would be **less than significant**.

c. **Hazardous Materials near Schools:** Northside Elementary School is located approximately 1.3 miles south of the project site. As previously discussed, the project would not be anticipated to emit hazardous

emissions or handle hazardous or acutely hazardous materials, substances, or waste. The project would be required to ensure that hazardous chemicals and solid wastes are handled per County, State, and Federal regulations. As such, impacts would be anticipated to be **less than significant**.

d. **Hazardous Sites:** The project site is not included on a list of or near any hazardous materials sites pursuant to Government Code section 65962.5 (DTSC, 2015). There would be **no impact**.

e-f. **Aircraft Hazards, Private Airstrips:** According to the EDC Zoning Map and the El Dorado County Airport Land Use Compatibility Plan (EDC ALUC 2012) the project site is not within any airport safety zone or airport land use plan area. The project is not located in the vicinity of a public or private airstrip. As such, the project would not be subject to any land use limitations contained within any adopted Comprehensive Land Use Plan and there would be no immediate hazard for people working in the project area or safety hazard resulting from airport operations and aircraft over-flights in the vicinity of the project site**. No impact** would be anticipated to occur within these categories.

g. **Emergency Plan:** The El Dorado County Fire District requirements will be incorporated in standards conditions of approval (COAs) that address site access, adequate fire flow, vegetation and fuel modification, and sprinkler and fire alarm requirements. No applicable emergency plan would be affected by the current proposal. The proposed commercial business would allow for adequate emergency ingress/egress and drive-aisle widths for interior circulation. The proposed structure has also been conditioned to be required to install sprinkler and fire alarms and provide adequate fire flow. Impacts would be **less than significant**.

h**.** **Wildfire Hazards:** The El Dorado County General Plan Safety Element precludes development in areas of high wildland fire hazard unless such development can be adequately protected from wildland fire hazards as demonstrated in a Fire Safe Plan prepared by a Registered Professional Forester (RPF) and approved by the local Fire Protection District and/or California Department of Forestry and Fire Protection. The degree of hazard in wildland areas depends on weather variables like temperature, wind, and moisture, the amount of dryness and arrangement of vegetation, slope steepness, and accessibility to human activities, accessibility of firefighting equipment, and fuel clearance around structures. The project site is in an area of very high hazard for wildland fire pursuant to Figure 5.8-4 of the 2004 General Plan Draft EIR. The Fire District has reviewed the project and did not identify significant wildfire hazards particular to this site, and provided COAs regarding fire flow, vegetation and fuel modification, and sprinkler and fire alarm requirements, which are to be incorporated into the permit approvals. Implementation of the fire district standards and California Building Codes would reduce the impacts of wildland fire to **less than significant**.

FINDING: The proposed project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and is not located within two miles of a public airport or in the vicinity of a private airstrip. It is anticipated that the proposed project would not create a significant risk to the public or the environment related to the use, storage, transport, or disposal of hazardous materials; interreference with an applicable emergency plan; or exposure to wildfire hazards; however, these topics will be further analyzed in the EIR.

X. HYDROLOGY AND WATER QUALITY. Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements?			**X**	
a. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			**X**	
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or -off-site?			**X**	
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			**X**	
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			**X**	
f. Otherwise substantially degrade water quality?			**X**	
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				**X**
h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				**X**
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				**X**
j. Inundation by seiche, tsunami, or mudflow?				**X**

Regulatory Setting:

Federal Laws, Regulations, and Policies

Clean Water Act

The Clean Water Act (CWA) is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The key sections pertaining to water quality regulation for the Proposed Project are CWA Section 303 and Section 402.

Section 303(d) — Listing of Impaired Water Bodies

Under CWA Section 303(d), states are required to identify "impaired water bodies" (those not meeting established water quality standards), identify the pollutants causing the impairment, establish priority rankings for waters on the list, and develop a schedule for the development of control plans to improve water quality. USEPA then approves the State's recommended list of impaired waters or adds and/or removes waterbodies.

Section 402—NPDES Permits for Stormwater Discharge

CWA Section 402 regulates construction-related stormwater discharges to surface waters through the NPDES, which is officially administered by USEPA. In California, USEPA has delegated its authority to the State Water Resources Control Board (SWRCB), which, in turn, delegates implementation responsibility to the nine RWQCBs, as discussed below in reference to the Porter-Cologne Water Quality Control Act.

The NPDES program provides for both general (those that cover a number of similar or related activities) and individual (activity- or project-specific) permits. General Permit for Construction Activities: Most construction projects that disturb 1.0 or more acre of land are required to obtain coverage under SWRCB's General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ). The general permit requires that the applicant file a public notice of intent to discharge stormwater and prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). SWPPP must include a site map and a description of the proposed construction activities, demonstrate compliance with relevant local ordinances and regulations, and present a list of Best Management Practices (BMPs) that will be implemented to prevent soil erosion and protect against discharge of sediment and other construction-related pollutants to surface waters. Permittees are further required to monitor construction activities and report compliance to ensure that BMPs are correctly implemented and are effective in controlling the discharge of construction-related pollutants.

Municipal Stormwater Permitting Program

SWRCB regulates stormwater discharges from municipal separate storm sewer systems (MS4s) through its Municipal Storm Water Permitting Program (SWRCB, 2013). Permits are issued under two phases depending on the size of the urbanized area/municipality. Phase I MS4 permits are issued for medium (population between 100,000 and 250,000 people) and large (population of 250,000 or more people) municipalities, and are often issued to a group of co-permittees within a metropolitan area. Phase I permits have been issued since 1990. Beginning in 2003, SWRCB began issuing Phase II MS4 permits for smaller municipalities (population less than 100,000).

El Dorado County is covered under two SWRCB Regional Boards. The West Slope Phase II Municipal Separate Storm Sewer Systems (MS4) NPDES Permit is administered by the Central Valley Regional Water Quality Control Board (RWQCB) (Region Five). The Lake Tahoe Phase I MS4 NPDES Permit is administered by the Lahontan RWQCB (Region Six). The current West Slope MS4 NPDES Permit was adopted by the SWRCB on February 5, 2013. The Permit became effective on July 1, 2013 for a term of five years and focuses on the enhancement of surface water quality within high priority urbanized areas. The current Lake Tahoe MS4 NPDES Permit was adopted and took effect on December 6, 2011 for a term of five years. The Permit incorporated the Lake Tahoe Total Maximum Daily Load (TMDL) and the Lake Clarity Crediting Program (LCCP) to account for the reduction of fine sediment particles and nutrients discharged to Lake Tahoe.

On May 19, 2015 the El Dorado County Board of Supervisors formally adopted revisions to the Storm Water Quality Ordinance (Ordinance 4992). Previously applicable only to the Lake Tahoe Basin, the ordinance establishes legal authority for the entire unincorporated portion of the County. The purpose of the ordinance is to 1) protect health, safety, and general welfare, 2) enhance and protect the quality of Waters of the State by reducing pollutants in storm water discharges to the maximum extent practicable and controlling non-storm water discharges to the storm drain system, and 3) cause the use of Best Management Practices to reduce the adverse effects of polluted runoff discharges on Waters of the State.

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities complying with FEMA regulations that limit development in floodplains. The NFIP regulations permit development within special flood hazard zones provided that residential structures are raised above the base flood elevation of a 100-year flood event. Non-residential structures are required either to provide flood proofing construction techniques for that portion of structures below the 100-year flood elevation or to elevate above the 100-year flood elevation. The regulations also apply to substantial improvements of existing structures.

State Laws, Regulations, and Policies

Porter–Cologne Water Quality Control Act

The Porter–Cologne Water Quality Control Act (known as the Porter–Cologne Act), passed in 1969, dovetails with the CWA (see discussion of the CWA above). It established the SWRCB and divided the state into nine regions, each overseen by an RWQCB. SWRCB is the primary State agency responsible for protecting the quality of the state's surface water and groundwater supplies; however, much of the SWRCB's daily implementation authority is delegated to the nine RWQCBs, which are responsible for implementing CWA Sections 401, 402, and 303[d]. In general, SWRCB manages water rights and regulates statewide water quality, whereas RWQCBs focus on water quality within their respective regions.

The Porter–Cologne Act requires RWQCBs to develop water quality control plans (also known as basin plans) that designate beneficial uses of California's major surface-water bodies and groundwater basins and establish specific narrative and numerical water quality objectives for those waters. Beneficial uses represent the services and qualities of a waterbody (i.e., the reasons that the waterbody is considered valuable). Water quality objectives reflect the standards necessary to protect and support those beneficial uses. Basin plan standards are primarily implemented by regulating waste discharges so that water quality objectives are met. Under the Porter–Cologne Act, basin plans must be updated every 3 years.

Discussion: A substantial adverse effect on Hydrology and Water Quality would occur if the implementation of the project would:

- Expose residents to flood hazards by being located within the 100-year floodplain as defined by the Federal Emergency Management Agency;
- Cause substantial change in the rate and amount of surface runoff leaving the project site ultimately causing a substantial change in the amount of water in a stream, river or other waterway;
- Substantially interfere with groundwater recharge;
- Cause degradation of water quality (temperature, dissolved oxygen, turbidity and/or other typical stormwater pollutants) in the project area; or
- Cause degradation of groundwater quality in the vicinity of the project site.

a. **Water Quality Standards:** There is potential for the proposed Project to result in degradation of water quality during both the construction and operational phases. Polluted runoff from the Project site during construction and operation could include sediment from soil disturbances, oil and grease from construction equipment, and pesticides and fertilizers from landscaped areas. The greatest potential source of water contaminants from the proposed development would be from erosion related to construction and from surface pollutants associated with the impervious surfaces on-site following completion of construction. This degradation could result in violation of water quality standards. The project would be subject to the National Pollutant Discharge Elimination System (NPDES) permit, which requires the use of Best Management Practices (BMPs), as outlined in the Storm Water Management Plan for Western El Dorado County (SWMP), to minimize water quality impacts from construction projects. The County would obtain coverage for the project under the Statewide General Permit for Discharges of Storm Water Associated with Construction Activity, Order No. 99-08 DWQ. In accordance with the provisions of the General Permit and the SWMP, the County would require the contractor to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) to reduce or minimize discharge of pollutants from construction activities. Due to the

implementation of BMPs as required by El Dorado County and the NPDES permit, construction activities associated with the project would result in less than significant impacts to water quality.

The project's proposed septic system design has been reviewed and approved by the Environmental Management Division (EMD), and future improvement plans would be further reviewed for approval by EMD to ensure waste water disposal does not impact water quality (see Section VII, Geology and Soils). With adherence to County Codes, impacts would be **less than significant**.

b. **Groundwater Supplies:** The geology of the Western Slope portion of El Dorado County is principally hard, crystalline, igneous, or metamorphic rock overlain with a thin mantle of sediment or soil. Groundwater in this region is found in fractures, joints, cracks, and fault zones within the bedrock mass. These discrete fracture areas are typically vertical in orientation rather than horizontal as in sedimentary or alluvial aquifers. Recharge is predominantly through rainfall infiltrating into the fractures. Movement of this groundwater is very limited due to the lack of porosity in the bedrock. There is no evidence that the project would substantially reduce or alter the quantity of groundwater in the vicinity, or materially interfere with groundwater recharge in the area of the proposed project. Impacts to groundwater supplies would be **less than significant**.

c-f. **Drainage Patterns:** No adverse increase in overall runoff and flows from pre-development levels is anticipated from the post-development project design. The project would be required to conform to the El Dorado County Grading, Erosion Control, and Sediment Ordinance County Code Section 110.14. This includes the use of BMPs to minimize degradation of water quality during construction. Impacts would be **less than significant**

g-j. **Flood-related Hazards:** The project site is not located within any mapped 100-year flood areas as shown on Firm Panel Number 06017C0175E, revised September 26, 2008, and would not result in the construction of any structures that would impede or redirect flood flows (FEMA, 2008). No dams that would result in potential hazards related to dam failures are located in the project area. The risk of exposure to seiche, tsunami, or mudflows would be remote. There would be **no impact**.

FINDING: The proposed project would not place housing or structures in a 100-year flood hazard area, or expose people or structures to risk from flooding, dam failure inundation, seiche, tsunami, or mudflow. It is anticipated that impacts related to changes in drainage patterns, surface and groundwater quality, and groundwater aquifer recharge would be less than significant; however, these topics will be further analyzed in the EIR.

XI. LAND USE PLANNING. *Would the project:*	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Physically divide an established community?				**X**
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			**X**	
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				**X**

Regulatory Setting:

California State law requires that each City and County adopt a general plan "for the physical development of the City and any land outside its boundaries which bears relation to its planning." Typically, a general plan is designed to address the issues facing the City or County for the next 15-20 years. The general plan expresses the community's development goals and incorporates public policies relative to the distribution of future public and private land uses. The El Dorado County General Plan was adopted in 2004. The 2013-2021 Housing Element was adopted in 2013.

Discussion: A substantial adverse effect on Land Use would occur if the implementation of the project would:

- Result in the conversion of Prime Farmland as defined by the State Department of Conservation;
- Result in conversion of land that either contains choice soils or which the County Agricultural Commission has identified as suitable for sustained grazing, provided that such lands were not assigned urban or other nonagricultural use in the Land Use Map;
- Result in conversion of undeveloped open space to more intensive land uses;
- Result in a use substantially incompatible with the existing surrounding land uses; or
- Conflict with adopted environmental plans, policies, and goals of the community.

a. **Established Community:** The project would not result in the physical division of an established community as it proposes commercial uses on lands designated by the General Plan for commercial uses. The project proposes retail-related uses that would be compatible with the project site's General Plan Commercial land use designation. There would be **no impact**.

b. **Land Use Consistency:** The parcel is zoned General Commercial with a Design Control overlay (CG-DC). The intent of the -DC combining zone is a discretionary permit that ensures architectural supervision and consistency with the adopted Design Guidelines (https://www.edcgov.us/Government/planning/Documents/Community-Design-Guide-Reformatted-Adopted-4-24-18.pdf). Typically, during the Design Review process the Planning Director has the initial approval authority over the project. The Planning Director has opted to waive their initial approval authority and has referred the project to the Planning Commission for review. The proposed project would be consistent with the land use development goals, objectives, and policies of the 2004 EDC General Plan, and would be consistent with the development standards contained within the EDC Zoning Ordinance. With an approved Design Review Permit, the project would be consistent with the project site's General Plan Commercial land use designation, and the CG-DC Zone District. As discussed in this Initial Study, the project would not be detrimental to public health, safety, and welfare, or injurious to the neighborhood. The proposed use is specifically permitted by the zoning and Design Control overlay. Impacts would be **less than significant**.

c. **Habitat Conservation Plan:** The project site is not within the boundaries of an adopted Natural Community Conservation Plan or any other conservation plan. As such, the proposed project would not conflict with an adopted conservation plan. There would be **no impact**.

FINDING: The project would not conflict with an adopted Natural Community Conservation Plan or any other conservation plan. It is anticipated that the project would be consistent with the applicable land use plans, policies, and regulations; however, this topic will be analyzed further in the EIR.

XI. MINERAL RESOURCES. *Would the project:*	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				**X**
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				**X**

Regulatory Setting:

Federal Laws, Regulations, and Policies

No federal laws, regulations, or policies apply to mineral resources and the Proposed Project.

State Laws, Regulations, and Policies

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act of 1975 (SMARA) requires that the State Mining and Geology Board identify, map, and classify aggregate resources throughout California that contain regionally significant mineral resources. Designations of land areas are assigned by CDC and California Geological Survey following analysis of geologic reports and maps, field investigations, and using information about the locations of active sand and gravel mining operations. Local jurisdictions are required to enact planning procedures to guide mineral conservation and extraction at particular sites and to incorporate mineral resource management policies into their general plans.

The California Mineral Land Classification System represents the relationship between knowledge of mineral deposits and their economic characteristics (grade and size). The nomenclature used with the California Mineral Land Classification System is important in communicating mineral potential information in activities such as mineral land classification, and usage of these terms are incorporated into the criteria developed for assigning mineral resource zones. Lands classified MRZ-2 are areas that contain identified mineral resources. Areas classified as MRZ-2a or MRZ-2b (referred to hereafter as MRZ-2) are considered important mineral resource areas.

Local Laws, Regulations, and Policies

El Dorado County in general is considered a mining region capable of producing a wide variety of mineral resources. Metallic mineral deposits, including gold, are considered the most significant extractive mineral resources. Exhibit 5.9-6 shows the MRZ-2 areas within the county based on designated Mineral Resource (-MR) overlay areas. The -MR overlay areas are based on mineral resource mapping published in the mineral land classification reports referenced above. The majority of the county's important mineral resource deposits are concentrated in the western third of the county.

According to General Plan Policy 2.2.2.7, before authorizing any land uses within the -MR overlay zone that will threaten the potential to extract minerals in the affected area, the County shall prepare a statement specifying its reasons for considering approval of the proposed land use and shall provide for public and agency notice of such a statement consistent with the requirements of Public Resources Code section 2762. Furthermore, before finally approving any such proposed land use, the County shall balance the mineral values of the threatened mineral resource

area against the economic, social, or other values associated with the proposed alternative land uses. Where the affected minerals are of regional significance, the County shall consider the importance of these minerals to their market region as a whole and not just their importance to the County.

Where the affected minerals are of Statewide significance, the County shall consider the importance of these minerals to the State and Nation as a whole. The County may approve the alternative land use if it determines that the benefits of such uses outweigh the potential or certain loss of the affected mineral resources in the affected regional, Statewide, or national market.

Discussion: A substantial adverse effect on Mineral Resources would occur if the implementation of the project would:

- Result in obstruction of access to, and extraction of mineral resources classified MRZ-2x, or result in land use compatibility conflicts with mineral extraction operations.

a-b. **Mineral Resources.** The project site is not mapped as being within a Mineral Resource Zone (MRZ) by the State of California Division of Mines and Geology or in the EDC General Plan. No impacts would be anticipated to occur. The Western portion of El Dorado County is divided into four, 15-minute quadrangles (Folsom, Placerville, Georgetown, and Auburn) mapped by the State of California Division of Mines and Geology showing the location of MRZs. Those areas which are designated MRZ-2a contain discovered mineral deposits that have been measured or indicate reserves calculated. Land in this category is considered to contain mineral resources of known economic importance to the County and/or State. Review of the mapped areas of the County indicates that this site does not contain any mineral resources of known local or statewide economic value. **No impact** would occur related to mineral resources.

FINDING: No impacts to mineral resources are expected either directly or indirectly. This topic would not require analysis in the EIR.

XII. NOISE. *Would the project result in:*	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			**X**	
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			**X**	
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			**X**	
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			**X**	
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise level?				**X**
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				**X**

Regulatory Setting:

No federal or state laws, regulations, or policies for construction-related noise and vibration that apply to the Proposed Project. However, the Federal Transit Administration (FTA) Guidelines for Construction Vibration in Transit Noise and Vibration Impact Assessment state that for evaluating daytime construction noise impacts in outdoor areas, a noise threshold of 90 dBA Leq and 100 dBA Leq should be used for residential and commercial/industrial areas, respectively (FTA 2006).

For construction vibration impacts, the FTA guidelines use an annoyance threshold of 80 VdB for infrequent events (fewer than 30 vibration events per day) and a damage threshold of 0.12 inches per second (in/sec) PPV for buildings susceptible to vibration damage (FTA 2006).

Discussion: A substantial adverse effect due to Noise would occur if the implementation of the project would:

- Result in short-term construction noise that creates noise exposures to surrounding noise sensitive land uses in excess of 60dBA CNEL;
- Result in long-term operational noise that creates noise exposures in excess of 60 dBA CNEL at the adjoining property line of a noise sensitive land use and the background noise level is increased by 3dBA, or more; or
- Results in noise levels inconsistent with the performance standards contained in Table 6-1 and Table 6-2 in the El Dorado County General Plan.

GENERAL PLAN TABLE 6-2
NOISE LEVEL PERFORMANCE PROTECTION STANDARDS
FOR NOISE SENSITIVE LAND USES
AFFECTED BY NON-TRANSPORTATION* SOURCES

Noise Level Descriptor	Daytime 7 a.m. - 7 p.m.		Evening 7 p.m. - 10 p.m.		Night 10 p.m. - 7 a.m.	
	Community	Rural	Community	Rural	Community	Rural
Hourly L_{eq}, dB	55	50	50	45	45	40
Maximum level, dB	70	60	60	55	55	**50**

Each of the noise levels specified above shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

The County can impose noise level standards which are up to 5 dB less than those specified above based upon determination of existing low ambient noise levels in the vicinity of the project site.

In Community areas the exterior noise level standard shall be applied to the property line of the receiving property. In Rural Areas the exterior noise level standard shall be applied at a point 100' away from the residence. The above standards shall be measured only on property containing a noise sensitive land use as defined in Objective 6.5.1. This measurement standard may be amended to provide for measurement at the boundary of a recorded noise easement between all effected property owners and approved by the County.

*Note: For the purposes of the Noise Element, transportation noise sources are defined as traffic on public roadways, railroad line operations and aircraft in flight. Control of noise from these sources is preempted by Federal and State regulations. Control of noise from facilities of regulated public facilities is preempted by California Public Utilities Commission (CPUC) regulations. All other noise sources are subject to local regulations. Non-transportation noise sources may include industrial operations, outdoor recreation facilities, HVAC units, schools, hospitals, commercial land uses, other outdoor land use, etc.

The project area is located within the community of Cool and experiences increased ambient noise levels from vehicular traffic along Highway 49 and Highway 193. Community ambient noise surveys were conducted in December 2002 and January 2003 for the purpose of documenting and measuring the existing noise environment in areas of the County that contain noise-sensitive land uses. The Highway 193/Cherry Acres Road intersection within the community of Cool was evaluated during these surveys, which indicate that the Ldn in the project vicinity is 47.6 dBA and the CNEL is 47.9 dBA. The ambient noise environment is predominantly a result of vehicular traffic and truck traffic from the Teichert Quarry located approximately 1.2 miles north of the project area. County General Plan Policy 6.5.1.11 outlines standards for daytime construction and would apply to construction-related noise associated with the project. General Plan Policy 6.5.1.11 notes that nighttime construction activities are allowed if it can be shown that nighttime construction activities would alleviate traffic congestion and safety hazards.

a. **Noise Exposures:** Construction activities could increase noise levels temporarily in the vicinity of the project. Actual noise levels would depend on the type of construction equipment involved, distance to the source of the noise, time of day, and similar factors. However, these increases would be temporary. Construction activity would comply with noise standards for construction activities outlined in General Plan Policy 6.5.1.11. Given that the project contractor would adhere to applicable County construction-related noise standards, this impact is considered **less than significant**.

b. **Groundborne Shaking:** The project may generate intermittent ground borne vibration or shaking events during project construction. These potential impacts would be limited to project construction. Adherence to the time limitations of construction activities from 7:00am to 7:00pm Monday through Friday and 8:00am to

5:00pm on weekends and federally recognized holidays would limit the ground shaking effects in the project area. Impacts would be anticipated to be **less than significant**.

c. **Permanent Noise Increases:** The project would not be anticipated to increase the ambient noise levels in the area in excess of the established noise thresholds anticipated for lands designated by the General Plan for commercial uses. The proposed retail-related uses would not be anticipated to exceed the established General Plan noise thresholds. Impacts would be **less than significant**.

d. **Short Term Noise:** Construction activities would increase noise levels temporarily in the vicinity of the project. Actual noise levels would depend on the type of construction equipment involved, distance to the source of the noise, weather, time of day, and other factors. However, these increases would be temporary. Construction activity would comply with noise standards for construction activities outlined in General Plan Policy 6.5.1.11. Because the project contractor would be required to comply with applicable County construction-related noise standards, this impact is considered **less than significant**.

e-f. **Aircraft Noise:** The project is not located within an airport and use plan or in the immediate vicinity of a private airstrip. There would be **no impact**.

FINDING: As conditioned, and with adherence to the County Code for construction activity, no significant direct or indirect impacts to noise levels would occur. This topic would not be considered in the EIR.

XIII. POPULATION AND HOUSING. *Would the project:*	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Induce substantial population growth in an area, either directly (i.e., by proposing new homes and businesses) or indirectly (i.e., through extension of roads or other infrastructure)?			**X**	
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				**X**
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				**X**

Regulatory Setting:

No federal or state laws, regulations, or policies apply to population and housing and the proposed project.

Discussion: A substantial adverse effect on Population and Housing would occur if the implementation of the project would:

- Create substantial growth or concentration in population;
- Create a more substantial imbalance in the County's current jobs to housing ratio; or
- Conflict with adopted goals and policies set forth in applicable planning documents.

a. **Population Growth:** The proposed project does not include the construction of any new homes; however, it does include the construction of a retail use that could create a limited number of new jobs in the region.

While the addition of new employment opportunities could increase the County's population, it is anticipated that the majority of new employees would likely be existing residents of the County or surrounding area. As such, the proposed project is unlikely to result in a demand for new housing. The impact is **less than significant**.

b. **Housing Displacement: The project site is undeveloped and n**o existing housing stock would be displaced by the proposed project. **No impact** would be anticipated to occur.

c. **Replacement Housing:** The project site is undeveloped, thus would not involve the displacement of any people. Therefore, the project would not necessitate the construction of any replacement housing. **No impact** would occur.

FINDING: The proposed project would not displace housing or people. It is anticipated that the proposed project would not induce substantial population growth in the area, either directly or indirectly. This topic does not require analysis in the EIR.

XIV. PUBLIC SERVICES. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Fire protection?			**X**	
b. Police protection?			**X**	
c. Schools?			**X**	
d. Parks?			**X**	
e. Other government services?			**X**	

Regulatory Setting:

Federal Laws, Regulations, and Policies

California Fire Code

The California Fire Code (Title 24 CCR, Part 9) establishes minimum requirements to safeguard public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings. Chapter 33 of CCR contains requirements for fire safety during construction and demolition.

Discussion: A substantial adverse effect on Public Services would occur if the implementation of the project would:

- Substantially increase or expand the demand for fire protection and emergency medical services without increasing staffing and equipment to meet the Department's/District's goal of 1.5 firefighters per 1,000 residents and 2 firefighters per 1,000 residents, respectively;
- Substantially increase or expand the demand for public law enforcement protection without increasing staffing and equipment to maintain the Sheriff's Department goal of one sworn officer per 1,000 residents;
- Substantially increase the public school student population exceeding current school capacity without also including provisions to adequately accommodate the increased demand in services;
- Place a demand for library services in excess of available resources;
- Substantially increase the local population without dedicating a minimum of 5 acres of developed parklands for every 1,000 residents; or
- Be inconsistent with County adopted goals, objectives or policies.

a. **Fire Protection:** El Dorado County Fire District provides fire protection services and emergency services to the project area. The nearest fire station is Station 72 located approximately 0.10-mile northwest of the project site at 7200 Saint Florian Court in Cool. Development of the project site would result in a need for fire protection services to respond to any potential incidents that may occur at the site. The project would be subject to review by the District, to ensure all required fire protection measures are incorporated into the building plans. The project site is located in a developed part of the County that currently receives fire service. While a new commercial building could potentially require services, it would not result in the need for new fire personnel or facilities, as services can adequately be provided by existing personnel out of existing facilities. Fire Department fees will be collected as part of the Building Permit process. Therefore, this impact is **less than significant**.

b. **Police Protection:** Law enforcement services for the project area are provided by the El Dorado County Sheriff. Development of the project site could potentially result in a need for police protection services to respond to any potential incidents that may occur at the site. However, the project site is located in a developed part of the County that currently receives police service. While a new commercial land use would require services, it would not result in the need for new police personnel or facilities, as services can adequately be provided by existing personnel out of existing facilities. Therefore, this impact is **less than significant**.

c-e. **Schools, Parks, and Government Services:** There are no components of operating the proposed project that would include any permanent population-related increases that would substantially contribute to increased demand on schools, parks, or other governmental services that could, in tum, result in the need for new or expanded facilities. The impact to these services would be **less than significant**.

FINDING: It is anticipated that the increased demand for public services resulting from development of the proposed project would be addressed through the payment of established impact fees; however, this topic will be further analyzed in the EIR.

XV. RECREATION.	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			**X**	
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			**X**	

Regulatory Setting:

National Trails System

The National Trails System Act of 1968 authorized The National Trails System (NTS) in order to provide additional outdoor recreation opportunities and to promote the preservation of access to the outdoor areas and historic resources of the nation. The Appalachian and Pacific Crest National Scenic Trails were the first two components, and the System has grown to include 20 national trails.

The National Trails System includes four classes of trails:

1. National Scenic Trails (NST) provide outdoor recreation and the conservation and enjoyment of significant scenic, historic, natural, or cultural qualities. The Pacific Coast Trail falls under this category. The PCT passes through the Desolation Wilderness area along the western plan area boundary.
2. National Historic Trails (NHT) follow travel routes of national historic significance. The National Park Service has designated two National Historic Trail (NHT) alignments that pass through El Dorado County, the California National Historic Trail and the Pony Express National Historic Trail. The California Historic Trail is a route of approximately 5,700 miles including multiple routes and cutoffs, extending from Independence and Saint Joseph, Missouri, and Council Bluffs, Iowa, to various points in California and Oregon. The Pony Express NHT commemorates the route used to relay mail via horseback from Missouri to California before the advent of the telegraph.
3. National Recreation Trails (NRT) are in, or reasonably accessible to, urban areas on federal, state, or private lands. In El Dorado County there are 5 NRTs.

State Laws, Regulations, and Policies

The California Parklands Act

The California Parklands Act of 1980 (Public Resources Code Section 5096.141-5096.143) recognizes the public interest for the state to acquire, develop, and restore areas for recreation and to aid local governments to do the same. The California Parklands Act also identifies the necessity of local agencies to exercise vigilance to see that the parks, recreation areas, and recreational facilities they now have are not lost to other uses.

The California state legislature approved the California Recreational Trail Act of 1974 (Public Resources Code Section 2070-5077.8) requiring that the Department of Parks and Recreation prepare a comprehensive plan for California trails. The California Recreational Trails Plan is produced for all California agencies and recreation providers that manage trails. The Plan includes information on the benefits of trails, how to acquire funding, effective stewardship, and how to encourage cooperation among different trail users.

The 1975 Quimby Act (California Government Code Section 66477) requires residential subdivision developers to help mitigate the impacts of property improvements by requiring them to set aside land, donate conservation easements, or pay fees for park improvements. The Quimby Act gave authority for passage of land dedication ordinances to cities and counties for parkland dedication or in-lieu fees paid to the local jurisdiction. Quimby exactions must be roughly proportional and closely tied (nexus) to a project's impacts as identified through traffic studies required by CEQA. The exactions only apply to the acquisition of new parkland; they do not apply to the physical development of new park facilities or associated operations and maintenance costs.

The County implements the Quimby Act through §16.12.090 of the County Code. The County Code sets standards for the acquisition of land for parks and recreational purposes, or payments of fees in lieu thereof, on any land subdivision. Other projects, such as ministerial residential or commercial development, could contribute to the demand for park and recreation facilities without providing land or funding for such facilities.

Local Laws, Regulations, and Policies

The 2004 El Dorado County General Plan Parks and Recreation Element establishes goals and policies that address needs for the provision and maintenance of parks and recreation facilities in the county, with a focus on providing recreational opportunities and facilities on a regional scale, securing adequate funding sources, and increasing tourism and recreation-based businesses. The Recreation Element describes the need for 1.5 acres of regional parkland, 1.5 acres of community parkland, and 2 acres of neighborhood parkland per 1,000 residents. Another 95 acres of park land are needed to meet the General Plan guidelines.

Discussion: A substantial adverse effect on Recreational Resources would occur if the implementation of the project would:

- Substantially increase the local population without dedicating a minimum of 5 acres of developed parklands for every 1,000 residents; or
- Substantially increase the use of neighborhood or regional parks in the area such that substantial physical deterioration of the facility would occur.

a-b. **Parks and Recreational Services:** The project does not include any increase in permanent population that would contribute to increased demand on recreation facilities or contribute to increased use of existing facilities such that physical deterioration of the facility would occur. The Olmstead Loop Trailhead, part of the Auburn State Recreation Area, is located on the other side of State Route 49, and is visible from the project site. However, the project would have no impact on this facility. Impacts to recreation would be **less than significant**.

FINDING: It is anticipated that the development of the proposed project would not result in increased use of parks or recreational facilities, or require the construction of new facilities; however, these topics will be further analyzed in the EIR.

XVI. TRANSPORTATION/TRAFFIC. *Would the project:*	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?				**X**
b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?			**X**	
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				**X**
d. Result in inadequate emergency access?			**X**	

Regulatory Setting:

Federal Laws, Regulations, and Policies

No federal laws, regulations, or policies apply to transportation/traffic and the Proposed Project.

State Laws, Regulations, and Policies

Caltrans manages the state highway system and ramp interchange intersections. This state agency is also responsible for highway, bridge, and rail transportation planning, construction, and maintenance.

Local Laws, Regulations, and Policies

According to the transportation element of the County General Plan, Level of Service (LOS) for County-maintained roads and state highways within the unincorporated areas of the county shall not be worse than LOS E in the Community Regions or LOS D in the Rural Centers and Rural Regions. Level of Service is defined in the latest edition of the Highway Capacity Manual (Transportation Research Board, National Research Council). There are some roadway segments that are exceptions from these standards and are allowed to operate at LOS F. The SR 49 segment between State Route 193 to the North County Line is allowed to operate at LOS F (Max $V/C^2 = 1.51$). According to Policy TC-Xe, "worsen" is defined as any of the following number of project trips using a road facility at the time of issuance of a use and occupancy permit for the development project:

A. A two percent increase in traffic during a.m. peak hour, p.m. peak hour, or daily
B. The addition of 100 or more daily trips, or
C. The addition of 10 or more trips during the a.m. or p.m. peak hour.

Discussion: The Transportation and Circulation Policies contained in the County General Plan establish a framework for review of thresholds of significance and identification of potential impacts of new development on the County's road system. These policies are enforced by the application of the Transportation Impact Study (TIS) Guidelines (El Dorado County 2014), the County Design and Improvements Standards Manual, and the County Encroachment Ordinance, with review of individual development projects by the El Dorado County Department of Transportation's Development and Planning Divisions. The TIS Guidelines (El Dorado County 2014) indicate that a substantial adverse effect to traffic would occur if the implementation of the project would:

- Result in an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system;
- Generate traffic volumes which cause violations of adopted level of service standards (project and cumulative); or
- Result in or worsen Level of Service (LOS) F traffic congestion during weekday, peak-hour periods on any highway, road, interchange or intersection in the unincorporated areas of the county as a result of a residential development project of 5 or more units.

Note that per Public Resources Code Section 21099 and CEQA Guidelines Section 15064.3, LOS may not be used to determine a significant transportation impact under CEQA. Beginning on July 1, 2020, vehicle miles travelled (VMT) shall be the preferred methodology for determining the transportation effects of a project. Therefore, LOS analysis is provided below for informational purposes only, in order to facilitate the evaluation of the project's compliance with Policies TC-Xa through TC-Xi of the General Plan. In addition, a qualitative discussion of VMT is included, pending the adoption of VMT guidelines by El Dorado County.

a. **Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?**

A Traffic Impact Analysis was prepared for the proposed project by KD Anderson & Associates (July 2019 and updated in March 2020). The study area includes roadways State Route 49, Northside Drive, and State Route 193. Study intersections include State Route 49 / St. Florian Court, State Route 49 / Northside Drive, State Route 49 / commercial Driveway, State Route 49 / State Route 193, and Northside Drive / UPS Driveway.

The project is expected to generate a total of 578 daily trips, with roughly 11% or 62 trips during the p.m. peak hour. After discounting for pass-by trips already occurring on SR 49 adjacent to the site, the project is projected to generate 42 new trips in the weekday p.m. peak hours. Development of the project (Existing Plus Project Condition) does not result in an unacceptable LOS based on the criteria adopted by El Dorado County. Satisfactory operations are currently experienced at the study intersections and no changes to existing LOS are projected with development of the site. Traffic signal warrants are met with and without the project at the SR 49/ SR 193 intersection. Current peak period queues can be accommodated within existing turn lanes. The current roadway segment LOS on state highways near the project, which range from LOS D on SR 193 and SR 49 south of Cool to LOS E on SR 49 north of Cool, would not change as a result of the project. Additionally, the increment of traffic added to SR 49 north of Cool would be below the County's thresholds for worsened traffic conditions as defined by Policy TC-Xe of the County General Plan and stated above.

In the cumulative (future) scenario, the study intersections are projected to operate without significant delays with the existing traffic controls, and the County's LOS D minimum standard for intersections would be met with or without development of the proposed project. The project would not change the roadway segment LOS projected on state highways, and while SR 49 north of Cool would continue to operate at LOS E with and without the project, the increment of traffic that would be added by the Dollar Generals falls below the County's thresholds for worsened traffic conditions as defined by Policy TC-Xe of the County General Plan. Traffic signal warrants would continue to be met at the SR 49/SR 193 intersection. With and without the project the queue of peak period traffic in the southbound left turn lane at the SR 49 / SR 193 intersection would extend beyond the striped turn pocket. The queue would extend into the adjoining two-way left turn lane but would not reach the next driveway on the west side of SR 49. Caltrans has commented that a roundabout may someday be installed at this location; however, no funding or definitive project has been identified.

Typically, El Dorado County monitors the operation of intersections, and adds them to the fee priority list as appropriate. The proposed project would contribute its fair share to the cost of regional circulation improvements, including any SR 49/SR193 improvements by paying adopted fees, and no additional mitigation related to roadway capacity and Level of Service is required.

El Dorado County General Plan Policy TC-4i states that within "Community Regions and Rural Centers, all development shall include pedestrian/bike paths connecting to adjacent development and to schools, parks, commercial areas and other facilities where feasible. In Rural Regions, pedestrian/bike paths shall be considered as

appropriate. "The Traffic study addressed this policy stating that it is unlikely employees or customers of this project would elect to walk in appreciable numbers to and from the site, as there is little residential or commercial development near the site. However, the project would include a Class 2 bike lane/path on SR 49, consistent with the policy. This improvement may be constructed by the applicant or may be subject to an in-lieu fee.

The LOS analysis is provided for informational purposes only. The project would be consistent with transportation policies of the El Dorado County General Plan, Transportation and Circulation Element. There would be **no impact** associated with transportation policy consistency.

b. **Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?**

Current direction regarding methods to identify VMT and comply with state requirements is provided by the California Governor's Office of Planning and Research (OPR) December 2018 publication, Technical Advisory on Evaluating Transportation Impacts in CEQA. This advisory contains technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures. Again, OPR provides this Technical Advisory as a resource for the public to use at their discretion. OPR is not enforcing or attempting to enforce any part of the recommendations contained herein. (Government Code Section 65035 ["It is not the intent of the Legislature to vest in the Office of Planning and Research any direct operating or regulatory powers over land use, public works, or other state, regional, or local projects or programs."].) OPR provides this direction for retail projects:

> Retail Projects. Generally, lead agencies should analyze the effects of a retail project by assessing the change in total VMT because retail projects typically reroute travel from other retail destinations. A retail project might lead to increases or decreases in VMT, depending on previously existing retail travel patterns.

From the standpoint of transportation and travel as categorized by the Institute of Transportation Engineers (ITE), the use most similar to Dollar General Store is "Variety Store" (Code 814). The land use description notes that a Variety Store is a retail store providing health care & beauty aids, cleaning supplies, snack food, household items and some apparel. This is not a "dollar store" where everything is priced at one dollar, but rather is a small neighborhood store offering value and convenience.

The project lies within a trade area that encompasses the community of Cool, Georgetown, Pilot Hill and Coloma and the surrounding rural area which are expected to provide the majority of its customer base. The most comparable / competing retail outlets are located to the south, north and east and are noted below:

South of SR 193
- Pilot Hill Market & Deli
- Sutter Center Market, Coloma
- Raley's SC, Placerville (19 miles from Cool)

North of SR 193
- Cool General Store
- Savemart SC, Auburn (6 miles)

East of SR 49
- Holiday Market
- Marvel Food, Georgetown (12 miles)

Based on the location of competing stores, the most likely effect on regional travel associated with the development of the project is to slightly reduce the length of trips from areas east of SR 49 that are today made to large retail centers located north (Auburn) and south (Placerville) of the SR 49/SR 193 intersection, and to offer another option for shopping trips made by residents of areas to the north and south along SR 49. As the proposed project is relatively close to other stores, the regional effect on VMT is likely to be a reduction caused by offering a closer shopping option for some customers, and the project's impact would be **less than significant**.

c. **Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

No design features associated with the proposed Project would increase hazards. **No impact** would occur.

d. **Result in inadequate emergency access?**

The proposed project site would have adequate access for emergency vehicles. Additionally, the project was reviewed by the Fire District for the adequacy of the interior project road circulation and availability of adequate emergency ingress and egress in the project design. The Fire District did not respond with any concerns pertaining to the proposed project's emergency ingress and egress capabilities as it was shown on the submitted site plan. Impacts would be **less than significant**.

FINDING: The proposed project would not conflict with a program plan, ordinance or policy addressing the circulation system, and would not increase hazards due to a geometric design feature or incompatible uses. It is anticipated that the proposed project would not increase VMT or interfere with emergency access; however, these topics will be further analyzed in the EIR.

XVII. TRIBAL CULTURAL RESOURCES. *Would the project:*				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a Tribal Cultural Resource as defined in Section 21074?		**X**		

Regulatory Setting:

Federal Laws, Regulations, and Policies

No federal laws, regulations, or policies apply to Tribal Cultural Resources (TCRs) and the Proposed Project.

State Laws, Regulations, and Policies

Assembly Bill (AB) 52

AB 52, which was approved in September 2014 and effective on July 1, 2015, requires that CEQA lead agencies consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of a proposed project, if so requested by the tribe. The bill, chaptered in CEQA Section 21084.2, also specifies that a project with an effect that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment.

Defined in Section 21074(a) of the Public Resources Code, TCRs are:

1. Sites, features, places, cultural landscapes, sacred places and objects with cultural value to a California Native American tribe that are either of the following:
    a. Included or determined to be eligible for inclusion in the California Register of Historical Resources; or
    b. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

TCRs are further defined under Section 21074 as follows:

c. A cultural landscape that meets the criteria of subdivision (a) is a TCR to the extent that the landscape is geographically defined in terms of the size and scope of the landscape; and
d. A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a TCR if it conforms with the criteria of subdivision (a).

Mitigation measures for TCRs must be developed in consultation with the affected California Native American tribe pursuant to newly chaptered Section 21080.3.2, or according to Section 21084.3. Section 21084.3 identifies mitigation measures that include avoidance and preservation of TCRs and treating TRCs with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource.

Discussion:

In general, significant impacts are those that diminish the integrity, research potential, or other characteristics that make a TCR significant or important. To be considered a TCR, a resource must be either: (1) listed, or determined to be eligible for listing, on the national, state, or local register of historic resources, or: (2) a resource that the lead agency chooses, in its discretion, to treat as a TCR and meets the criteria for listing in the state register of historic resources pursuant to the criteria set forth in Public Resources Code Section 5024.1(c). A substantial adverse change to a TCR would occur if the implementation of the project would:

- Disrupt, alter, or adversely affect a TCR such that the significance of the resource would be materially impaired

a. Tribal Cultural Resources. The United Auburn Indian Community of the Auburn Rancheria (UAIC), the Wilton Rancheria, the Washoe Tribe of Nevada and California, the Ione Band of Miwok Indians, the Nashville-El Dorado Miwok, the T'si Akim Maidu, and the Shingle Springs Band of Miwok Indians (SSBMI) were notified of the proposed project and given access to all project documents. No other tribe had requested to be notified of the proposed projects for consultation in the project area at the time. In response to consultation requests from the UAIC and the SSBMI, the Cultural Resource Report and Biological Study were provided for this project. Pursuant to the Archaeological Report, the geographic area of the project sites are not known to contain any resources listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as designed in Public Resources Code section 5020.1(k), or considered significant by a California Native American tribe. As part of the consultation process with the UAIC, mitigation measures were identified to address inadvertent discoveries of potential tribal cultural resources. With implementation of mitigation measure TCR-1, the potential impact of inadvertent discovery of TCRs would be **less than significant**.

TCR-1: If any Tribal Cultural Resources (TCRs) are discovered during ground disturbing construction activities, all work shall cease within 100 feet of the find. The appropriate tribal representatives from culturally affiliated tribes shall be immediately notified. Work at the discovery location shall not resume, until the potential TCR is determined, in consultation with culturally affiliated tribes, that the find is not a TCR, or that the find is a TCR and all necessary investigation and evaluation of the discovery under the requirements of the CEQA, including AB 52, has been satisfied. Preservation in place is the preferred alternative, and every effort must be made to preserve the identified resource in place, including but not limited to project redesign. Should be project redesign be required, the project shall be required to obtain a revision to the Design Review Permit. The contractor shall implement any measures deemed by the County to be necessary and feasible to preserve in place, avoid, or minimize impacts to the resource, including, but not limited to, facilitating the appropriate tribal treatment of the find, as necessary and feasible to preserve in place, avoid, or minimize impacts to the resource, including, but not limited to, facilitating the appropriate tribal treatment of the find as necessary.

FINDING: No significant tribal cultural resources have been identified on the project site; however, cultural resources could be encountered during ground disturbing construction activities. This topic will be further analyzed in the EIR.

XVIII. UTILITIES AND SERVICE SYSTEMS. *Would the project:*	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				**X**
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				**X**
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			**X**	
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				**X**
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				**X**
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				**X**
g. Comply with federal, state, and local statutes and regulations related to solid waste?				**X**

Regulatory Setting:
Federal Laws, Regulations, and Policies

Energy Policy Act of 2005

The Energy Policy Act of 2005, intended to reduce reliance on fossil fuels, provides loan guarantees or tax credits for entities that develop or use fuel-efficient and/or energy efficient technologies (USEPA, 2014). The act also increases the amount of biofuel that must be mixed with gasoline sold in the United States (USEPA, 2014).

State Laws, Regulations, and Policies

California Integrated Waste Management Act of 1989

The California Integrated Waste Management Act of 1989 (Public Resources Code, Division 30) requires all California cities and counties to implement programs to reduce, recycle, and compost wastes by at least 50 percent by 2000 (Public Resources Code Section 41780). The state, acting through the California Integrated Waste Management Board (CIWMB), determines compliance with this mandate. Per-capita disposal rates are used to determine whether a jurisdiction's efforts are meeting the intent of the act.

California Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Reuse and Recycling Access Act of 1991 (Public Resources Code Sections 42900-42911) requires that all development projects applying for building permits include adequate, accessible areas for collecting and loading recyclable materials.

California Integrated Energy Policy

Senate Bill 1389, passed in 2002, requires the California Energy Commission (CEC) to prepare an Integrated Energy Policy Report for the governor and legislature every 2 years (CEC 2015a). The report analyzes data and provides policy recommendations on trends and issues concerning electricity and natural gas, transportation, energy efficiency, renewable energy, and public interest energy research (CEC 2015a). The 2014 Draft Integrated Energy Policy Report Update includes policy recommendations, such as increasing investments in electric vehicle charging infrastructure at workplaces, multi-unit dwellings, and public sites (CEC 2015b).

Title 24–Building Energy Efficiency Standards

Title 24 Building Energy Efficiency Standards of the California Building Code are intended to ensure that building construction, system design, and installation achieve energy efficiency and preserve outdoor and indoor environmental quality (CEC 2012). The standards are updated on an approximately 3-year cycle. The 2013 standards went into effect on July 1, 2014.

Urban Water Management Planning Act

California Water Code Sections 10610 *et seq.* requires that all public water systems providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 acre-feet per year (AFY), prepare an urban water management plan (UWMP).

Other Standards and Guidelines

Leadership in Energy & Environmental Design

Leadership in Energy & Environmental Design (LEED) is a green building certification program, operated by the U.S. Green Building Council (USGBC) that recognizes energy efficient and/or environmentally friendly (green) components of building design (USGBC, 2015). To receive LEED certification, a building project must satisfy prerequisites and earn points related to different aspects of green building and environmental design (USGBC, 2015). The four levels of LEED certification are related to the number of points a project earns: (1) certified (40–49 points), (2) silver (50–59 points), (3) gold (60–79 points), and (4) platinum (80+ points) (USGBC, 2015). Points or credits may be obtained for various criteria, such as indoor and outdoor water use reduction, and construction and demolition (C&D) waste management planning. Indoor water use reduction entails reducing consumption of building fixtures and fittings by at least 20% from the calculated baseline and requires all newly installed toilets, urinals, private lavatory faucets, and showerheads that are eligible for labeling to be WaterSense labeled (USGBC, 2014). Outdoor water use reduction may be achieved by showing that the landscape does not require a permanent irrigation system beyond a maximum 2.0-year establishment period, or by reducing the project's landscape water requirement by at least 30% from the calculated baseline for the site's peak watering month (USGBC, 2014). C&D waste management points may be obtained by diverting at least 50% of C&D material and three material streams, or generating less than 2.5 pounds of construction waste per square foot of the building's floor area (USGBC, 2014).

Discussion: A substantial adverse effect on Utilities and Service Systems would occur if the implementation of the project would:

- Breach published national, state, or local standards relating to solid waste or litter control;
- Substantially increase the demand for potable water in excess of available supplies or distribution capacity without also including provisions to adequately accommodate the increased demand, or is unable to provide an adequate on-site water supply, including treatment, storage and distribution;

- Substantially increase the demand for the public collection, treatment, and disposal of wastewater without also including provisions to adequately accommodate the increased demand, or is unable to provide for adequate on-site wastewater system; or
- Result in demand for expansion of power or telecommunications service facilities without also including provisions to adequately accommodate the increased or expanded demand.

a. **Wastewater Requirements**: The project will be served by an on-site septic system. See Section VII. Geology and Soils. There would be **no impact**.

b,d,e. **Construction of New/Expansion of Existing Wastewater Treatment Facilities, Sufficient Water Supply, and Adequate Capacity:** The project proposes to utilize an on-site wastewater treatment system. Water service to the site is provided by the Georgetown Divide Public Utilities District, which has provided a "will serve" letter for the proposed project. There would be **no impact** resulting from project water and wastewater utilities.

c. **New Stormwater Facilities:** The project would connect to the existing stormwater collection system, and would include an on-site retention area, to the east of the parking lot. No new off-site stormwater facilities would be required. All grading activities exceeding 250 cubic yards of graded material or grading completed for the purpose of supporting a structure must meet the provisions contained in the County of El Dorado Grading, Erosion, and Sediment Control Ordinance, County Code Section 110.14. All drainage facilities would be required to be constructed in compliance with standards contained in the County of EI Dorado Drainage Manual. As such, impacts would be anticipated to be **less than significant**.

f-g. **Solid Waste Disposal and Requirements:** El Dorado Disposal distributes municipal solid waste to Forward Landfill in Stockton and Kiefer Landfill in Sacramento. Pursuant to El Dorado County Environmental Management Solid Waste Division staff, both facilities have sufficient capacity to serve the County. Recyclable materials are distributed to a facility in Benicia and green wastes are sent to a processing facility in Sacramento. County Ordinance No. 4319 requires that new development provide areas for adequate, accessible, and convenient storing, collecting and loading of solid waste and recyclables. Onsite solid waste collection would be handled through the local waste management contractor. The project proposes a covered trash enclosure, located adjacent to the proposed loading area. Half of the proposed trash enclosure would be used for solid waste disposal and the other half would be used for storage and collection of paper, cardboard, glass, plastics, and metals. There would be **no impact**.

FINDING: The proposed project would not exceed wastewater treatment requirements, require new or expanded wastewater treatment facilities, or require new or expanded water entitlements. Further, the project would not generate waste that could exceed landfill capacities or that would conflict with regulations related to solid wastes. It is anticipated that the proposed project would not require new or expanded stormwater drainage facilities; however, this topic will be analyzed further in the EIR.

IXX. WILDFIRE. *Would the project:*

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?			**X**	
b. Due to slope, prevailing winds, and other factors exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?			**X**	
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities: that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?			**X**	
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?			**X**	

Discussion:

a,b,d. The project is surrounded by grassland and oak woodland. The project site is within a State responsibility area and the California Department of Forestry and Fire Protection (CalFire) has indicated the project site is within a high fire hazard rank. Implementation of the proposed project would not alter any roadways, access points, or otherwise degrade traffic operations and access to the area in such a way as to interfere with an emergency response or evacuation plan. There are no proposed residences associated with the project, and project operations would not notable increase the risk of wildfire on the project site. As such, implementation of the proposed project would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. The project would be constructed of fire-resistant materials, including stucco and concrete block. The project is required to adhere to all fire prevention and protection requirements and regulations of El Dorado County including the El Dorado County Fire Hazard Ordinance and the Uniform Fire Code, as applicable. Pertinent measures include, but are not limited to, the use of equipment with spark arrestors and non-sparking tools during project activities. The project applicant would also be required to develop the project structures to meet 'defensible space' requirements as specified under Objective 6.2.1 of the Safety Element of the El Dorado County General Plan.

The proposed project would construct a 9,100 sq. ft. commercial retail building (Dollar General) on a 1.69-acre site. The project has been reviewed by the El Dorado Fire Protection District and CalFire and is not anticipated to exacerbate wildfire risks. The project area is generally flat and not characterized by steep and sloping terrain. The potential for the proposed project to expose people or structures to significant risks

related post-fire landslide would be limited. Impacts would be less than significant. Project impacts would be **less than significant**.

c. The project site would be accessed via a new 40-foot wide driveway connecting to Northside Drive. The project site is currently served by a fire hydrant. The proposed project would not include or require the installation or maintenance of additional infrastructure that would exacerbate fire risk. Impacts would be **less than significant**.

Mitigation Measures: None Required.

FINDING: It is anticipated that, with adherence to El Dorado County Code of Ordinances (County Code), the project would not increase risks related to wildfires; however, this topic will be further analyzed in the EIR.

XIX. MANDATORY FINDINGS OF SIGNIFICANCE. *Does the project:*	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?			**X**	
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			**X**	
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			**X**	

Discussion:

a. No substantial evidence contained in the project record has been found that would indicate that this project would have the potential to significantly degrade the quality of the environment, including through the inducement of urban decay. The project would not have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of California history, pre-history, or tribal cultural resources. Any impacts from the project would be **less than significant**. However, an EIR will be prepared that will consider the overall effect of the project upon the environment, including the potential to cause urban decay, an indirect effect of economic change.

b. Cumulative impacts are defined in Section 15355 of the California Environmental Quality Act (CEQA) Guidelines as *two or more individual effects, which when considered together, would be considerable or which would compound or increase other environmental impacts.*

The project is consistent with the planning and zoning designations for the project site, and is located near existing development. While cumulative impacts are anticipated to be **less than significant**; the EIR will identify past, present, and reasonably foreseeable projects that may result in a cumulative impact when considered with the proposed project.

c. As outlined and discussed in this document, as conditioned and with compliance with County Codes, this project would be anticipated to have a less than significant project-related environmental effect which would cause substantial adverse effects on human beings, either directly or indirectly. Nevertheless, an EIR is being prepared which will consider environmental impacts on human beings.

FINDINGS: It is not anticipated that the proposed project would degrade the quality of the environment, result in a cumulatively considerable contribution to a potential cumulative impact, or cause substantial adverse effects on human beings; however, these topics will be further analyzed in the EIR.

INITIAL STUDY ATTACHMENTS

Attachment 1 .....Project Figures
.....Project Location Map
.....Project Boundary
.....Project Site Plan
.....Project Site Photograph
.....Proposed Elevation

SUPPORTING INFORMATION SOURCE LIST

Bole & Associates. 2019a. *Opinion Regarding Naturally Occurring Asbestos (NOA) on El Dorado County APN 071-500-037*.

Bole & Associates. 2019b. Phase I Environmental Site Assessment, APN 071-500-037, 1020 Northside Drive, Cool El Dorado County, California. June 18, 2019.

Bole & Associates. 2020. *Revised Biological Assessment and Wetland Determination for El Dorado County APN 071-500-037*. February 18, 2020.

CAPCOA Guide. 2010. http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-QuantificationReport-9-14-Final.pdf

CARB (California Air Resources Board). 2008. *Climate Change Scoping Plan.* Available at: http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf

CARB (California Air Resources Board). 2014. *First Update to the Climate Change Scoping Plan Building on the Framework Pursuant to AB 32 – The California Global Warming Solutions Act of 2006*. May 2014. Accessed May 2019. http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf

CARB. 2017. *California's 2017 Climate Change Scoping Plan*. November 2017. Accessed May 2019. https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf.

CARB. 2019. "Area Designation Maps/State and National." Last reviewed October 24, 2019. http://www.arb.ca.gov/desig/adm/adm.htm

California Attorney General's Office. (2010). Addressing Climate Change at the Project Level. Available at: http://ag.ca.gov/globalwarming/pdf/GW_mitigation_measures.pdf

CDC (California Department of Conservation). 2008. *Farmland Mapping and Monitoring Program: El Dorado County Important Farmland 2008*. Available at: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2008/eld08.pdf.

CDC. 2013a. Important Farmland Categories webpage. Available online at: www.conservation.ca.gov/dlrp/fmmp/mccu/Pages/ map_categories.aspx.

CDC. 2013b. The Land Conservation Act. Available online at: www.conservation.ca.gov/dlrp/lca/Pages/Index.aspx.

CEC (California Energy Commission). 2018a. "Electricity Consumption by County." Accessed February 2020. http://ecdms.energy.ca.gov/elecbycounty.aspx.

CEC. 2018b. "Gas Consumption by County." Accessed February 2020. http://ecdms.energy.ca.gov/gasbycounty.aspx.

California Department of Toxic Substances Control (DTSC). 2015. *DTSC's Hazardous Waste and Substances Site List - Site Cleanup (Cortese List)*. Retrieved April 15, 2015 from http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm.

California Energy Commission. 2006. *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004, Staff Final Report*. Publication CEC-600-2006-013-SF.

California Department of Transportation (Caltrans). 2015. Scenic Highway Program FAQs: Caltrans Landscape Architecture Program. Retrieved February 27, 2015 from www.dot.ca.gov/hq/ LandArch/scenic/faq.htm.

Caltrans. 2013. *California Scenic Highway Program, Officially Designated State Scenic Highways*. Retrieved April 8, 2015 from http://www.dot.ca.gov/hq/LandArch/scenic/schwy.htm.

California Geological Survey. (2007). Alquist-Priolo Earthquake Fault Zone Maps. Retrieved April 15, 2015 from http://www.quake.ca.gov/gmaps/WH/regulatorymaps.htm.

California Geological Survey. (2013). Seismic Hazards Zonation Program. Retrieved April 15, 2015 from http://www.conservation.ca.gov/cgs/shzp/Pages/affected.aspx.

California Code of Regulations. *Guidelines for Implementation of the California Environmental Quality Act.* Title 14, Section 15000, et seq. 14 CCR 15000

California Office of Emergency Services. 2015. Business Plan/EPCRA 312. Available online at: www.caloes.ca.gov/for-businesses-organizations/plan-prepare/hazardousmaterials/hazmat-business-plan.

The Climate Registry. 2019. Default Emission Factors. May. Accessed May 2019. https://www.theclimateregistry.org/wp-content/uploads/2019/05/The-Climate-Registry-2019-Default-Emission-Factor-Document.pdf.

Dudek. 2020. *DR19-0006/Cool Dollar General, Oak Resources Technical Report*. February 25, 2020.

Earth Strata Geotechnical Services, Inc. 2019. *Preliminary Geotechnical Interpretive Report, Proposed Commercial Building, Assessor's Parcel Number 071-500-037, Located South of Northside Drive, Cool City Area, El Dorado County, California*. September 27, 2019.

El Dorado County. 2003. *El Dorado County General Plan Draft Environmental Impact Report*. State Clearinghouse No. 2001082030. Placerville, CA: El Dorado County Planning Services.

El Dorado County. 2004. *El Dorado County General Plan: A Plan for Managed Growth and Open Roads; A Plan for Quality Neighborhoods and Traffic Relief*. Placerville, CA: El Dorado County Planning Services.

El Dorado County. 2014. *Transportation Impact Study Guidelines*. November.

El Dorado County. 2015. Asbestos Review Areas, Western Slope, County of El Dorado, State of California.

El Dorado County Airport Land Use Commission. 2012. *Airport Land Use Compatibility Plan.* Adopted June 28, 2012.

EDCAQMD (El Dorado County Air Quality Management District).2000. *Rules and Regulations of the El Dorado County Air Quality Management District*. Retrieved April 15, 2015 from http://www.arb.ca.gov/DRDB/ED/CURHTML/R101.HTM.

EDCAQMD. 2002. *Guide to Air Quality Assessment: Determining the Significance of Air Quality Impacts Under the California Environmental Quality Act*. Retrieved from http://www.edcgov.us/Government/AirQualityManagement/Guide_to_Air_Quality_Assessment.aspx.

EDCAQMD (El Dorado County Air Quality Management District). 2002. *Guide to Air Quality Assessment.* February 2002. https://www.edcgov.us/Government/AirQualityManagement/Pages/guide_to_air_quality_assessment.aspx

EDCAQMD et al. (EDCAQMD, Sacramento Metropolitan Air Quality Management District, Feather River Air Quality Management District, Placer County Air Pollution Control District, and Yolo-Solano Air Quality Management District). 2017. *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan*. July 2017. Accessed December 2019. http://www.ysaqmd.org/wp-content/uploads/Planning/Sac-Regional-2008-NAAQS-Attainment-and-RFP-Plan.pdf

EIA (U.S. Energy Information Administration). 2019. "California State Profile and Energy Estimates – Table F16: Total Petroleum Consumption Estimates, 2017." Accessed June 2019. https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_use_pa.html&sid=US&sid=CA.

FEMA (Federal Emergency Management Agency). 2008. FEMA Map Service Center, Current FEMA Issued Flood Maps: El Dorado County, California, unincorporated area, no. 06017C1025E. Available at: http://map1.msc.fema.gov/idms/IntraView.cgi?KEY=94926033&IFIT=1.

OPR (Governor's Office of Planning and Research). 2008,. *Technical advisory: CEQA and climate change: Addressing climate change through California Environmental Quality Act Review*. Available at: Sacramento, CA. http://www.opr.ca.gov/ceqa/pdfs/june08-ceqa.pdf.

Jensen, Sean Michael, M.A. 2019. *Cultural Resources Inventory Survey, Cool Development Project, circa 1.69-acres, El Dorado County, California*. June 3, 2019.

KD Anderson and Associates. 2019. *Traffic Impact Analysis for Cool Dollar General Store*. July 24, 2019.

NEHRP (National Earthquake Hazards Reduction Program). 2009. Background and History. Available online at: www.nehrp.gov/about/history.htm.

OEHHA (Office of Environmental Health Hazard Assessment). 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments*. February 2015. https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

OPR (California Governor's Office of Planning and Research). 2008. "Technical Advisory—CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review*."* June 19, 2008. Accessed May 2019. http://opr.ca.gov/docs/june08-ceqa.pdf

SLOAPCD (San Luis Obispo Air Pollution Control District). 2012. *CEQA Air Quality Handbook.* April 2012. https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/CEQA_Handbook_2012_v2%20%28Updated%20Map2019%29_

Sacramento Metropolitan Air Quality Management District (SMAQMD). (2010). Construction GHG Emissions Reductions. Available at: http://airquality.org/ceqa/cequguideupdate/Ch6FinalConstructionGHGReductions.pdf

SWRCB (State Water Resources Control Board). 2013. Storm Water Program, Municipal Program. Available online at: www.waterboards.ca.gov/water_issues/programs/stormwater/municipal.shtml.

USDA (United States Department of Agriculture). 1974. Soil Conservation Service and Soil Service. *Soil Survey of El Dorado Area, California*. Retrieved April 10, 2015 from http://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/california/el_doradoCA1974/EDA.pdf

U.S. Environmental Protection Agency. 2014. Summary of the Energy Policy Act. Available online at: www2.epa.gov/laws-regulations/summary-energy-policy-act

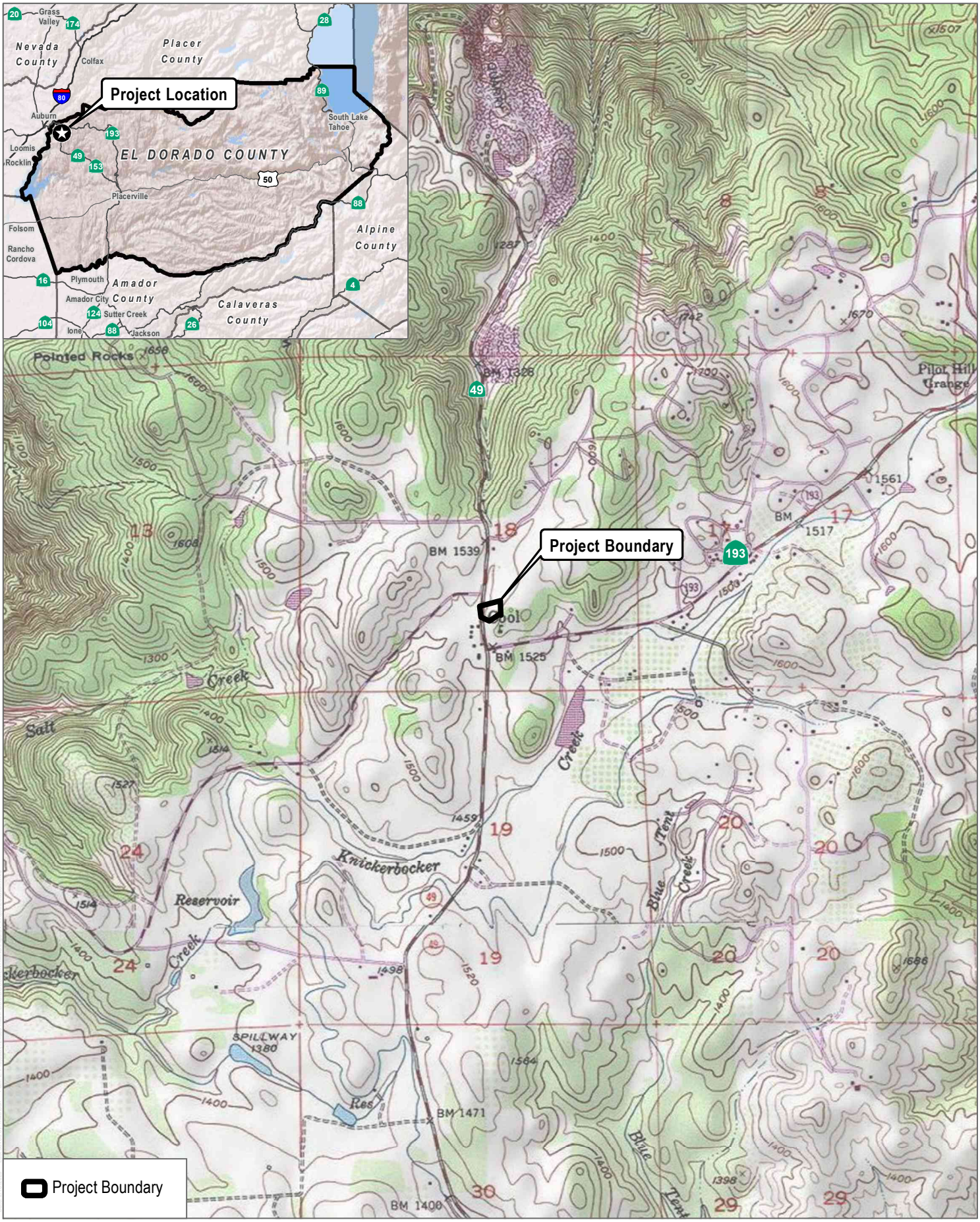
U.S. Environmental Protection Agency. 2015. The Green Book Nonattainment Areas for Criteria Pollutants. Available online at: www.epa.gov/airquality/greenbook.

U.S. Green Building Council (USGBC). 2014. LEED v4 for Building Design and Construction Addenda. Updated October 1, 2014. Available online at: www.usgbc.org/resources/leed-v4-building-design-and-construction-redline-current-version.

U.S. Green Building Council. 2015. LEED Overview. Available online at: www.usgbc.org/leed.

Zimbelman. 2018. Email from Kyle Zimbelman, El Dorado County. Feb. 18, 2020.

ATTACHMENT 1 FIGURES



SOURCE: USGS 7.5 Minute Series Auburn Quadrangle(s)
Township 12N / Range 9E / Section 18

DUDEK

0 750 1,500 Feet

FIGURE 1

Project Location

County of El Dorado Dollar General Project

SOURCE: MHM Engineers & Surveyors 2019, USDA 2016

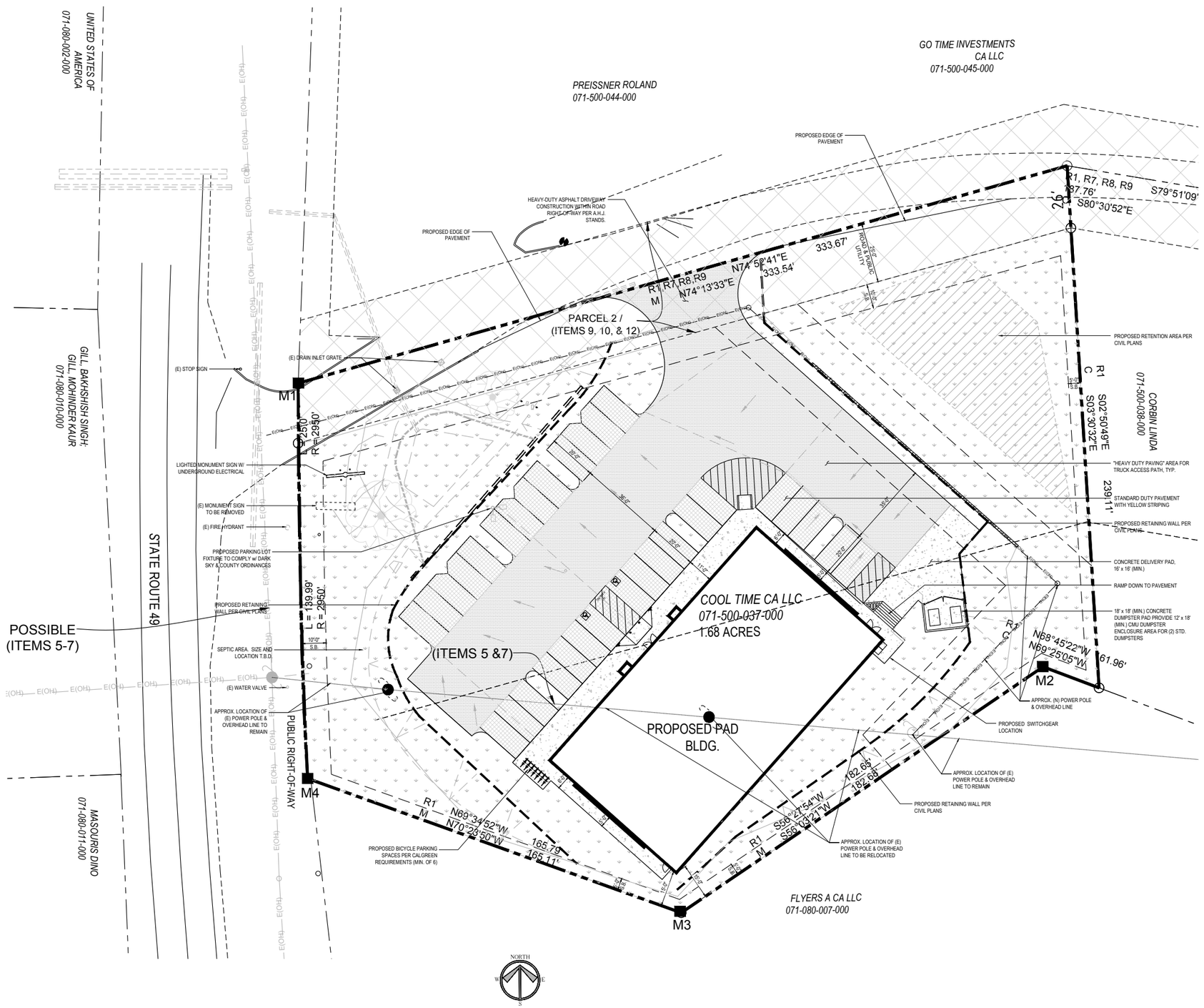
DUDEK

0 50 100 Feet

FIGURE 2

Project Site

County of El Dorado Dollar General Project



SOURCE: MPA Architects, Inc. 2019

FIGURE 3

Site Plan

County of El Dorado Dollar General Project

DUDEK

FIGURE 4

Site Photograph

County of El Dorado Dollar General Project

DUDEK

SOURCE: MPA Architects, Inc. 2019

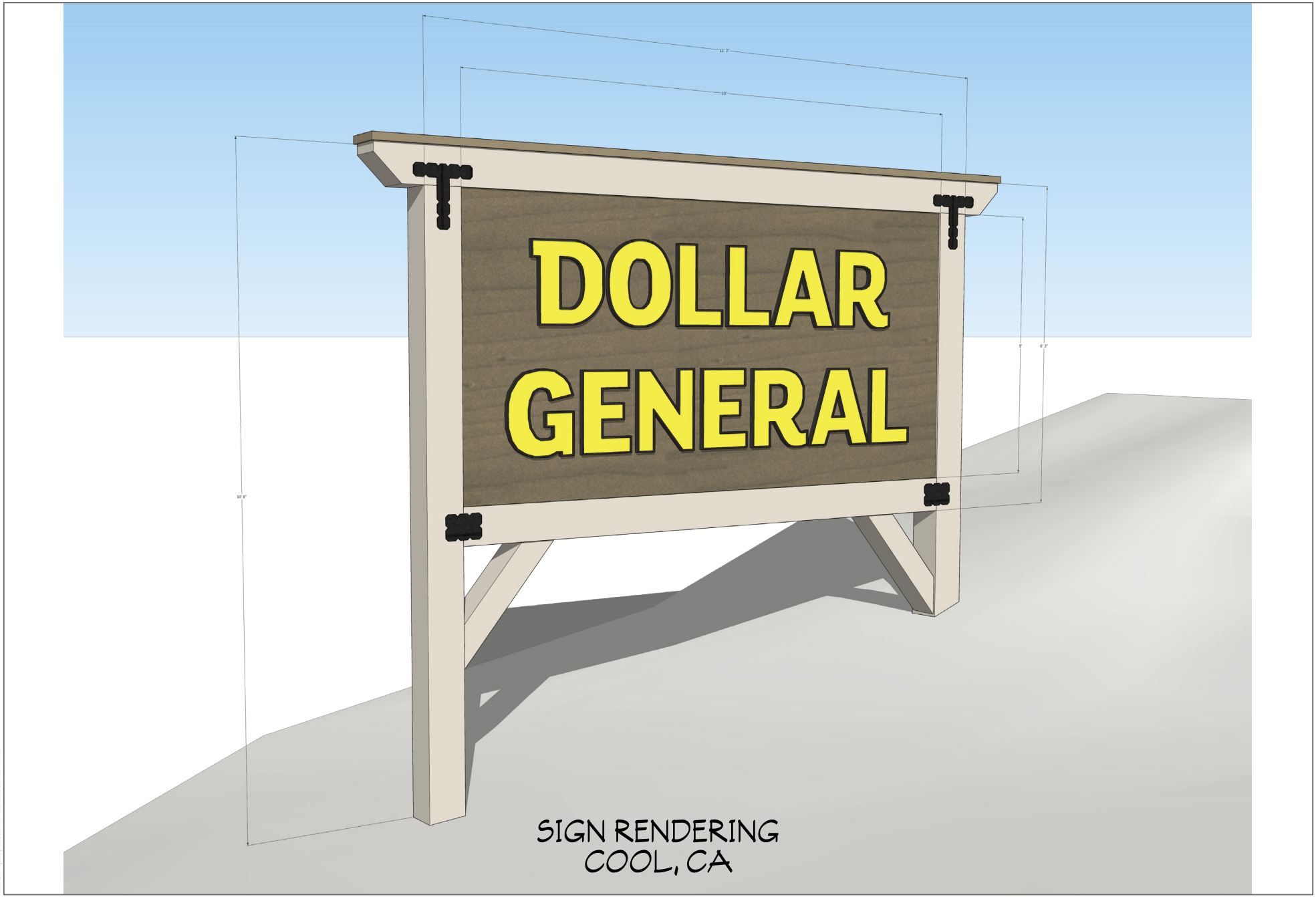
FIGURE 5A

Proposed Elevation

County of El Dorado Dollar General Project

DUDEK

Path: Z:\Projects\12345001\MAPDOCS\DOCUMENT.MXD



SOURCE: MPA Architects, Inc. 2019

FIGURE 5B

Proposed Monument Sign

County of El Dorado Dollar General Project

DUDEK

Dollar General - Cool, CA

Batt & Board / Horizontal Siding: Barrel Stove (DE6216), Deep Crimson (DEA152), Golden Rays (DE5423), Trinity Islands (DE6249), Downpour (DE5871)
Trim: Fossil (DE6225)
Metal Panel: Light Stone (Ceco)
Roof: Owens Corning "Teak" Shingles
Metal Roof: Bronze

SOURCE: MPA Architects, Inc. 2019

FIGURE 5C

Proposed Color Board

County of El Dorado Dollar General Project

DUDEK

FIGURE 6

Existing Retail View

County of El Dorado Dollar General Project

DUDEK

Appendix B

NOP and Scoping Comments

NOTICE OF PREPARATION
of a Draft Environmental Impact Report

Date: September 22, 2020

To: Agencies and Interested Parties

From: Evan Mattes, Senior Planner, El Dorado County Planning Services

Subject: Notice of Preparation of a Draft Environmental Impact Report forthe Design Review Permit DR19-0006/Cool General Retail

Review Period: September 22, 2020 to October 21, 2020

El Dorado County will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the Design Review Permit DR19-006/Cool General Retail project (project or proposed project) in El Dorado County. This Notice of Preparation (NOP) initiates the environmental scoping process in accordance with the California Environmental Quality Act (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 impacts to allow agencies and interested parties the opportunity to provide a meaningful response related to the scope and content of the EIR, including mitigation measures and alternatives that should be considered in the EIR (CEQA Guidelines 14 CCR Section 15082[b]). The project description and location are briefly described below.

PROVIDING COMMENTS

El Dorado County is soliciting written comments from public agencies, private organizations, and individuals regarding the scope and content of the environmental documentation. Because of time limits mandated by State law, comments should be provided no later than 5:00 PM on Wednesday October 21, 2020. Please send all comments to:

Evan Mattes, Senior Planner
County of El Dorado Development Services Division 2850 Fairlane Court
Placerville, CA 95667
Email: CoolGeneralRetail@edcgov.us

Agencies that will need to use the EIR when considering permits or other approvals for the proposed project should provide the name of a contact person, phone number, and email address in their comment. Comments provided by email should include “Cool General Retail NOP Comment” in the subject line, and the name and physical address of the commenter in the body of theemail.

PROJECT LOCATION

The project site is located on the east side of State Route 49 (SR 49), south of the intersection with Northside Drive in the community of Cool, El Dorado County, California.

PROJECT DESCRIPTION

The project applicant proposes to construct and operate a 9,100 sq. ft. commercial retail building (Dollar General) on a 1.68-acre site. The single-story building would have a maximum height of 33 feet. The building would be located in the southerly half of the project site, facing the intersection of Highway 49 and Northside Drive. Site improvements would include a driveway, parking lot, utilities, lighting, signage, and landscaping. The project design is in the style of new traditional, Western false front architecture. The design is responsive to community input and designed to replicate the "Boardwalk" project on the west side of SR 49. The building would have a central entrance, and parapet walls extending along the building façade. The project would include parking for 31 vehicles, a refuse enclosure for solid waste, landscaping, an on-site septic system, and on-site stormwater treatment. The project requires a Design Review Permit from El Dorado County.

POTENTIAL ENVIRONMENTAL IMPACTS

Pursuant to CEQA Section 15063, the County has conducted an initial study to determine if the proposed project may have a significant effect on the environment. The purpose of the initial study is to provide the County with information to use in determining whether to prepare an EIR and to assist in focusing the EIR on effects determined to be significant. The initial study includes detailed project description and location information. The initial study also identifies effects of the project found not to be significant and provides an explanation for that determination. The document is available electronically at the following link: INSERT LINK TO INITIAL STUDY HERE[MK1]

Alternatively, print copies of the document may be viewed at the County of El Dorado Development Services Division at 2850 Fairlane Court Placerville, CA 95667.

On the basis of the initial study and comments submitted to the County, the County has determined that the project may result in potentially significant effects related to the following topics:

- Transportation and traffic safety
- Public safety (police services)
- Urban decay

Based on the analysis presented in the initial study, the County anticipates that impacts related to the following topics would be less than significant or less than significant with mitigation, but will analyze each topic further in the EIR:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Tribal Cultural Resources
- Energy
- Geology/Soils
- Hazards/Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Transportation/Traffic
- Public Services and Recreation
- Public Utilities
- Wildfire

Based on the analysis presented in the initial study, the County has determined that the impacts related to the following topics would not be significant. These topics will not be analyzed further in the EIR.

- Agricultural Resources & Forest Land
- Mineral Resources
- Noise
- Population & Housing

Full documentation of the factual basis for this determination is provided in the initial study. Unless specific comments are received during the NOP public comment period that indicate a potential for the project to result in significant impacts, these less than significant effects will not be analyzed further in the EIR

LAW OFFICE OF DONALD B. MOONEY
417 Mace Boulevard, Suite J-334
Davis, CA 95618
530-758-2377
dbmooney@dcn.org

October 23, 2020

VIA ELECTRONIC MAIL
CoolGeneralRetail@edcgov.us

Evan Mattes
Planning and Building Department
2850 Fairlane Court
Placerville, CA 95667

Re: Comments on Notice of Preparation Regarding Draft Environmental Impact Report for Cool General Retail Project (Dollar General)

Dear Mr. Mattes:

This office represents Divide Preservation Society and Cool Pilot Hill Advisory Committee regarding the Cool General Retail Project ("Dollar General" or "Project").

1. **Transportation and Traffic Safety:** The EIR must address the potentially significant environmental impacts to traffic safety. Existing traffic is already to capacity at times and that adding additional traffic on and off Highway 49 to Northside Drive will mean longer waits to access either direction. There is existing congestion on Highway 49 near Northside Drive and adding Dollar General into the Northside Drive area access will result in further congestion making a hazardous driving situation even worse. The left turn lane on Highwy 49 south is of particular concern. The EIR must address the traffic safety issue associated with the Project.

2. **Public Safety:** There are numerous reports of violent crime associated with the Dollar General stores and that the stores serve as a robbery magnet. There is evidence and reports that that the company fails to adequately protect workers from violent crime. In part this is based upon the design of the store inside and outside, as well as insignificant staffing at their stores. While having only one employee on site fits into Dollar General "low-cost model" by reducing costs and expenses, it also increases the risk for robbery. Unfortunately for Cool and other communities, this low-cost model is not conducive to public safety, especially when decisions are based upon adhering to the low-cost model as opposed to implementing recommended security procedures. The Draft EIR must address public safety based upon Dollar General's business practices.

3. **Air Quality:** Cool and the surrounding area have extensive deposits of serpentine that contains asbestos. The Draft EIR must address the construction impacts to air quality if construction results in the disturbance and release of asbestos.

4. **Water Quality:** The Draft EIR also must address potential impacts associated with the septic system for the Project. Percolation tests in the area have proven that underground septic systems may not work.

The NOP fails to identify alternatives to the Project. CEQA and the CEQA Guidelines are quite clear that an EIR must contain a reasonable range of alternatives to the project or to the location of the project. (CEQA Guidelines, § 15126.6(a).) The EIR must evaluate alternatives that would avoid or substantially lessen a project's significant environmental impacts. (*Id.*) Thus, the EIR must contain alternatives that avoid or reduce impacts to transportation and traffic safety, public safety, and air quality.

Such alternatives should address modifying the project in such manner to protect pedestrian and cyclist safety. That may include modification of the ingress and egress to the site, as well as construction of sidewalks and bicycle paths. Additionally, the alternatives should address design of the project to address public safety to reduce the risk of robberies.

Sincerely,

Donald B. Mooney
Attorney for Divide Preservation Society &
Cool Pilot Hill Advisory Committee

cc: Clients

COOL PILOT HILL ADVISORY COMMITTEE
Chair, Aloha Adams
P. O. Box 365, Cool, CA 95614
530-320-0887
October 22, 2020

CoolGeneralRetail@edcgov.us
BOSfour@edcgov.us
Evan Mattes
Planning and Building Department
2850 Fairlane Court
Placerville, CA 95667

RE: Comments on Notice of Preparation Regarding Draft EIR for Cool General Retail (Dollar General)

Dear Mr. Mattes:

As Chair of the **Cool Pilot Hill Advisory Committee,** it is my responsibility to address multiple issues that need to be addressed within the scope of the pending EIR.

1. **Transportation and Traffic Safety:** The EIR must take into consideration the potentially significant environment impacts to traffic safety as existing traffic is already at capacity at times and additional traffic on and off Northside Drive will mean longer waits to access either direction. Adding the traffic from Dollar General will result in further congestion, making a hazardous driving situation even worse. Additionally, Northside Drive is not wide enough to sustain the added traffic. The Traffic Study that was done is inadequate, particularly since it was done on a Wednesday, when there was no school or weekend traffic. The EIR must address traffic safety issues associated with this project.
2. **Public Safety:** There are several issues regarding this issue, first there are numerous reports of violent crime associated with Dollar General and that DG stores are considered robbery magnets. Evidence and reports show that the company fails to adequately protect workers from violent crime due to the design of the stores and insignificant staffing. Their motto is to operate on a "low-cost model", which is not conducive to public safety or to the community of Cool.

   The second issue with public safety is the lack of a safe pedestrian walkway from the intersection of Highways 49 and 193 to Northside Drive. There are many youth and seniors who use this area to access the Post Office. Currently, large trucks use this area as a parking area while visiting the businesses across Hwy 49, where there is no crosswalk. **It is important to note that during the initial meetings nearly a year ago, the developers committed that there would be a paved walkway in this area. It has not been included in any of the reports since then.**

3. **Water/Air/Serpentine and Asbestos:** It is a known, and recorded, fact that Cool, as well as the whole Divide, has extensive deposits of serpentine that contains asbestos. Nothing has been said about how the quality of air will be affected when construction starts and how that will be mitigated. The soil in this area must be analyzed prior to any construction.

As a former student of the original Cave Valley School in early '50s, which was on the adjoining property proposed by Grocery Outlet, we were unable to use the newly installed flush toilet because the leach area would not perc. We were forced to use the old out-house! It is important to understand that the makeup of the soils have not changed in 70 years, the same problem still exists and septic issues **MUST** be addressed in this EIR.

Additionally, I do not believe there have been adequate studies of treatment of waste water. Of particular concern is the runoff and where it will go? This too, **must** be addressed in this EIR.

4. **Decay and Blight:** Addition of this business, with cheap products, will do nothing to add to the charm of the Gold Rush town of Cool. It is known the products are of lesser quality, but smaller packaging, that leads buyers to think they are getting a bargain when in fact the product costs more per item/ounce, etc. There are only so many spendable dollars among the residents of Cool and surrounding area, adding this low quality business doesn't contribute anything to the mix. It only serves to stretch the dollars already spent in Cool. Presuming the business fails, Cool is then left with another vacant building. Unfortunately, there are already at least seven (7) vacancies in the town, we don't need more!

As a native of Cool, it is my earnest desire to see the area survive and flourish with businesses that are needed and that contribute to the Cool Gold Rush atmosphere. Dollar General does none of that.

The EIR must evaluate alternatives that would avoid or substantially lessen the project's significant environmental impacts. Such alternatives should address modifications such as ingress and egress of Northside Drive, construction of walkways, public safety and full review of Air, Water and Soils.

Sincerely,
Aloha N. Adams
Chair, Cool Pilot Hill Advisory Committee

Cc: Board of Supervisors

Evan Mattes <evan.mattes@edcgov.us>

[CoolGeneralRetail] Cool, California

MAMABRUNO1 <mamabrunos@gmail.com> Wed, Sep 23, 2020 at 9:53 AM
To: "CoolGeneralRetail@edcgov.us" <CoolGeneralRetail@edcgov.us>

To whom it may concern. The proposed development in Cool, California is a terrible idea. We are a small community in the heart of wildfire country. Right now the number of cars, ignorant sightseers, littering and daily water rescues at the confluence is enough to stretch our resources. If you build a discount store you will bring many of those people into town. Our main intersection is a four way stop. I hate to think of all the traffic and accidents that will surely happen if you build a store at that location. I am all for progress but this is not what is needed in this little town. I appreciate your time, Karen Bruno resident of Cool, California

Evan Mattes <evan.mattes@edcgov.us>

[CoolGeneralRetail] Dollar General Store- please read

Rachel Debecker <rdebecker1@gmail.com> Thu, Sep 24, 2020 at 1:36 PM
To: CoolGeneralRetail@edcgov.us

Hi- I have been a resident of Cool for nearly 20 years, and love that it is a small town that is different than most.
I am opposed to this Dollar General Store store in our town due to the problems it will cause in traffic issues as well as the urban blight it will cause.
Please cease this development, which is not needed in any way in our small town of bar4500 people. Many residents travel frequently to Auburn or Placerville for work where most purchases can be madet here anyway.
Thank you for your consideration.

Sincerely,
-Rachel de Becker
1940 Tegra Rd
Cool. 95614

Evan Mattes <evan.mattes@edcgov.us>

[CoolGeneralRetail] Dollar General EIR - Public Comment

Carolynne Angleton <cwangleton@comcast.net> Fri, Oct 23, 2020 at 12:32 PM
To: "CoolGeneralRetail@edcgov.us" <CoolGeneralRetail@edcgov.us>, "edc.cob@edcgov.us" <edc.cob@edcgov.us>, "bosfour@service.govdelivery.com" <bosfour@service.govdelivery.com>

TO: Evan Mattes, Senior Planner County of El Dorado Planning and Building Department

As one of the founders of the divides preservation society I feel it is necessary to bring up multiple issues to be addressed within the scope of the EIR.

1. One of our original items of concern was public safety, as a local business owner of 15 years, (across the street from the site planned for DG) I leave that location often and it is not an easy intersection to cross unless you go to the four way stop. Even at that I have seen many near miss accidents, many stop signs run. As we all mentioned the traffic study done was in adequate. I encourage you to ensure that the traffic study this time is done at multiple times throughout the day as well as it reasonably cannot be accomplished during Covid when regular travel is limited. My concern is that you complete the study during this time and when life can returns to normal we then realized the huge issue that we are dealing with. I was involved in the project that Lori Parlin referred from August of 2017 “Ideas for making Cool a Cooler Community” At the time there was discussion of putting a few roundabouts in to slow the traffic at that location. It seems with the addition of Dollar General that would almost be a requirement.
2. Within this category is the pedestrian traffic. It would be incredibly unsafe for anyone to walk along Highway 49 traveling to Dollar General. We all know that young people will definitely do that. So pedestrian traffic must be addressed and in the inclusion widening the road and providing sidewalks for safe travel, or even bike lanes as well.
3. Another issue was urban decay/Blight. Again as a local business owner I am confident that Dollar General will have a negative affect on the current local businesses. I am confident that there are just not enough dollars to spread around for the addition of Dollar General. It is entirely possible that our local residences will not support dollar general and the it itself becomes the “blight” as it as it eventually becomes empty. I feel it is fiscally irresponsible to bring a business of that magnitude into our small community.
4. An additional issue that has surfaced is the septic situation and waste water removal. I don’t understand The ins and outs of this issue however I know that homeowners trying to build on lots where the lots don’t perk are not allowed to put an above ground septic in. Why would that exception be made for businesses? I believe this issue needs to be delved into further, and require a normal septic and wastewater removal system to no exceptions made for big business.
5. Additionally we live in a high serpentine/asbestos environment. I recently went to the county for a deck permit and was told if I moved more than 20 yards of dirt I would have to have the soil analyzed prior to building. I am confident that they are moving much more than 20 yards of dirt at that site, 20 yards of dirt will be moved with just the removal of the one Heritage Oak. It should be a requirement that the soil at that location be analyzed. Exposing an entire town and the complete downtown area as well as residents who travel through should not be exposed to the potential risk of this asbestos.

In closing I think you for your time and attention and encourage you to include the above items as requirements in this EIR.

Sincerely,
Carolynne Knisley
Divide Preservation Society

Don't measure life by the breaths you take, but by the moments that take your breath away...

Evan Mattes <evan.mattes@edcgov.us>

[CoolGeneralRetail] Cool Dollar General

Michael Huffmon <mhuffmon@sbcglobal.net> Mon, Sep 28, 2020 at 10:56 AM
To: "CoolGeneralRetail@edcgov.us" <CoolGeneralRetail@edcgov.us>

Good Morning Mr. Mattes:

I am writing in response to the Notice of Preparation that I received in the mail. Normally I do not get involved in issues like this, but in this case I need to speak out. I have seen these stores in other areas, like Foresthill, and could never understand why they would want to open in locations with limited business potential. That being said, it is their money, but it is our city. This is a small community and we have people passing through the area all the time because of the amenities we have in the area. Hiking, biking, running are always going on and they in themselves can cause traffic issues. The proposed corner is where we always have issues. We have logging trucks coming from the Georgetown area, all day every day when weather permits. They use the corner where the entrance would be to pull over to allow traffic to pass. If this is gone, now we will have to deal with them even more through the canyon. Minor I am sure to you, but a pain for those who live up hear and this is our only way to Auburn and I80. Also, the height of the building concerns me. It states the building will be 33' tall. This does not take into consideration that the corner that they are proposing is elevated. When you add the building on top of that, that is all you will see. For me that is an eye sore for the aesthetics of the area. Lastly, being a small community, we are loyal to the small businesses that are hear. We were excited when the Holiday Market came to town and they have been loyal to the community. Stores like this and the other proposed grocery chain that want to come in the area are not stores I will support and none of the neighbors I have spoken with will either. Bottom line, leave our community without further stores. We don't need them, don't want them. Thank you for your time.

Mike Huffmon
mhuffmon@sbcglobal.net

Evan Mattes <evan.mattes@edcgov.us>

[CoolGeneralRetail] Cool Dollar General EIR Coments

Tim Lasko <tlasko115@gmail.com> Wed, Oct 21, 2020 at 1:00 PM
To: CoolGeneralRetail@edcgov.us

Evan,
I am very concerned about the proposed Dollar General in Cool, Ca. I would like to see the EIR take a detailed look at transportation, traffic safety, police services, urban decay, asbestos risks, air quality, community aesthetics, and hydrology / water quality.

Of particular concern is the increased traffic and risk to emergency fire services impacted by the traffic. This intersection was heavily congested (prior to COVID) at peak commute times. For commuters traveling from Auburn to Georgetown (Southbound 49 to Eastbound 193), accessing the proposed location will be difficult and impactful to an already busy and inefficient intersection.

I appreciate your consideration...
--
Thanks,
Tim Lasko
1321 Aaron Cool Dr.
Cool, CA 95614
530.883.7005

Evan Mattes <evan.mattes@edcgov.us>

[CoolGeneralRetail] Dollar General

Cathryn Dickerson <cathryndickerson@gmail.com> Fri, Oct 23, 2020 at 3:30 PM
To: "CoolGeneralRetail@edcgov.us" <CoolGeneralRetail@edcgov.us>

El Dorado County Planning Commission

RE: Dollar General - Why is this being forced on a community that doesn't want it?

I hope that you will consider the article I have included here as well.

The traffic already exiting the post office drive on Hwy 49 is very hazardous. During evening rush hours in particular, it is extremely challenging to exit that driveway. Recently, I spent several minutes trying to exit and that's with the limited amount of post office traffic we currently have. Adding more traffic begs accidents at an already difficult intersection on a major highway.

It is also my understanding that often a liquor license is extended to Dollar General stores. With the addition of thousands of campers that will be using the upcoming SRA campsites, it seems ridiculous to add access to cheap liquor to the mix. Along with the fire safety concerns created by the expanded campsites, adding inexpensive alcohol access will increase the likelihood of alcohol related accidents and potential fire dangers.

The bottom line is that one would be hard pressed to find local support for Dollar General. I appreciate the three members of the BOS who support4d a review of this project which the planning commisssion seemed determined to green light to the detriment of our community. Why? Does some additional revenues warrant disregarding the wishes of the residents? At the Zoom meeting with the developer, he said there was widespread support for the project. Why did not one person supporting the idea show ip for the chance to give input? There wasn't one voice in support from the community.

The following New Yorker piece brings the problem of substandard safety at dollar stores to light. The nearest Sheriff's station is in Georgetown. This implies inadequate deterrent for a stand-alone business with an established history of holdups and shootings. The Zoom meeting with the developer furthered this complaint as is was established that thIS store would operate with one or two employees, which would make them an easy mark for robberies.

Also in the Zoom meeting, I learned that the BOS has deferred duties to help small communities establish community plans that would have clarified the desires of our community. In general it seems that most people enjoy the low key small business development that we have and would rather not have the face of the community altered by greedy developers. I don't think that any of the Planning Commission or BOS members reside in Cool. It is easy to approve such development when it is not in your backyard. The residents of our community deserve to establish the community we want. The developers presented himself as demanding of his right to do as her pleases and hostile to the residents input. I am very happy that this review was approved, and I hope that somehow the people who live hear are heard.

NO DOLLAR GENERAL, thank you!

The True Cost of Dollar Stores

By Alec MacGillisJune 29, 2020
The New Yorker

Since 2017, nearly fifty people have been killed at the two biggest chains

The Gun Violence Archive, a Web site that uses local news reports and law-enforcement sources to tally crimes involving firearms, lists more than two hundred violent incidents involving guns at Family Dollar or Dollar General stores since the start of 2017, nearly fifty of which resulted in deaths. The incidents include carjackings in the parking lot, drug deals gone bad, and altercations inside stores. But a large number involve armed robberies in which workers or customers have been shot. Since the beginning of 2017, employees have been wounded in shootings or pistol-whippings in at least thirty-one robberies; in at least seven other incidents, employees have been killed. The violence has not let up in recent months, when requirements for customers to wear masks have made it harder for clerks to detect shoppers who are bent on robbery. In early May, a worker at a Family Dollar in Flint, Michigan, was fatally shot after refusing entry to a customer without a mask.

Even the most image-conscious public corporations tend to acknowledge, in their required disclosures to investors and in their quarterly calls with market analysts, the challenges facing them. So it was startling to find no mention of the prevalence of crime and violence in recent filings for either Dollar General or Family Dollar and Dollar Tree. Company executives make occasional reference to "shrink," the industry euphemism for stock lost mainly to shoplifting or employee theft. But the steady stream of violence at the stores, much of it directed against employees, was omitted.

Dollar General emphasized its efforts to keep costs down. In its disclosures for the third quarter of 2019, Dollar General lamented the rise in nationwide hourly wages, and said that it was aiming to shift to self-checkout in many stores. The

company hopes not to have to increase security at stores, since its “financial condition could be affected adversely” by doing so

The chains’ owners have done little to maintain order in the stores, which tend to be thinly staffed and exist in a state of physical disarray.

The likelihood of a crime occurring depends on three elements: a motivated offender, a vulnerable victim, and the absence of a capable guardian,” the sociologist Patrick Sharkey wrote, in “Uneasy Peace,” from 2018.

Another way of putting this is that crime is not inevitable. Robberies and killings that have taken place at dollar-store chains would not have necessarily happened elsewhere. “The idea that crime is sort of a Whack-a-Mole game, that if you just press here it’ll move over here” is wrong, Richard Rosenfeld, a criminologist at the University of Missouri-St. Louis, told me. Making it harder to commit a crime doesn’t just push crime elsewhere; it reduces it. “Crime is opportunistic,” he said. “If there’s no opportunity, there’s no crime.”

Because dollar stores are heavily concentrated in poor towns and neighborhoods, many middle- and upper-middle-class consumers are unaware of their ubiquity—or of the frequency of armed robberies and shootings.

The stores undercut traditional grocery stores by having few employees, often only three per store, and paying them little.
“

In 2017, the year he was held up, there were thirty-two armed robberies at eighteen Dollar Generals and Family Dollars in Dayton. (This count didn’t include the store where he was robbed, which sits just beyond the city line.) Last year, there were two dozen. The violence has included more than robberies, too. Last July, a man and a woman were killed outside a west-side Family Dollar in a murder-suicide; in September, a man was shot during a drug deal outside the Dollar General where I had run into Donald and his mother.
All told, the Dayton police receive an average of nearly a thousand calls for service to the stores each year.

On November 1, 2018, Woods went to work on his day off, to fill in for an absent co-worker. Footage from a security camera shows a man entering the store just after 1 p.m., wearing a blue sweatshirt with the hood pulled up over a red cap, and holding a silver gun. He fired down the center aisle, hitting Woods in the back of the head. Then he pointed the gun at the cash register, before seeming to panic. He ran out of the store empty-handed. An ambulance arrived, but Woods was no longer breathing. After his body was removed, Dollar General remained open for several hours, before closing amid protests from local residents.

Thank you for considering my input,

Cathryn Dickerson

Evan Mattes <evan.mattes@edcgov.us>

[CoolGeneralRetail] new businesses in Cool

Furball <jjfurball04@gmail.com> Wed, Sep 23, 2020 at 10:55 AM
Reply-To: Furball <jjfurball04@gmail.com>
To: CoolGeneralRetail@edcgov.us

Please support the local businesses that already exist... or trying to exist..
Right now is NOT the time to bring in the Dollar General or Grocery Outlet... Please take in to consideration that right now existing business are trying their best to survive and help them out by at least not allowing those 2 businesses to build and undercut our existing businesses.
Someone needs to help the small businesses...

Thank you
Judy Jones

Appendix C

Air Quality and GHG Data

Dollar General - Cool CA - El Dorado-Mountain County County, Summer

Dollar General - Cool CA

El Dorado-Mountain County County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Free-Standing Discount Store	9.10	1000sqft	0.85	9,100.00	0
Parking Lot	31.00	Space	0.84	12,400.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	70
Climate Zone	1			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	210	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 was adjusted based PG&E's reported intensity for 2017 from the PG&E Corporate Responsibility and Sustainability Report (2019)

Land Use - 9.1 ksf Dollar General store and 31-space parking lot on 1.69-acres

Construction Phase - Construction duration anticipated at 135 days

Off-road Equipment - Default

Grading - Earthwork: 4,800 CY excavated, 4,400 CY balanced, 400 CY exported

Demolition - No demolition

Trips and VMT - 400 CY of net soil export would equate to 25 roundtrips (16 CY trucks), or 50 one-way trips total

On-road Fugitive Dust - Default

Architectural Coating - Default

Vehicle Trips - Adjusted weekday trip generation rate to match traffic report. Adjusted Saturday and Sunday trip generation proportionally to weekday change. 34% trips would be pass-by per traffic report

Energy Use - Default

Water And Wastewater - Default water use. 100% septic system would be used for wastewater

Solid Waste - Default

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	6.00
tblConstructionPhase	NumDays	200.00	111.00
tblConstructionPhase	NumDays	4.00	10.00
tblConstructionPhase	NumDays	10.00	6.00
tblConstructionPhase	PhaseEndDate	8/10/2021	3/8/2021
tblConstructionPhase	PhaseEndDate	7/13/2021	2/18/2021
tblConstructionPhase	PhaseEndDate	10/6/2020	9/16/2020
tblConstructionPhase	PhaseEndDate	7/27/2021	2/26/2021
tblConstructionPhase	PhaseEndDate	9/30/2020	9/2/2020
tblConstructionPhase	PhaseStartDate	7/28/2021	2/27/2021
tblConstructionPhase	PhaseStartDate	10/7/2020	9/17/2020
tblConstructionPhase	PhaseStartDate	10/1/2020	9/3/2020
tblConstructionPhase	PhaseStartDate	7/14/2021	2/19/2021
tblConstructionPhase	PhaseStartDate	9/29/2020	9/1/2020
tblGrading	AcresOfGrading	3.75	2.00
tblGrading	AcresOfGrading	1.00	2.00
tblGrading	MaterialExported	0.00	4,800.00
tblGrading	MaterialImported	0.00	4,400.00
tblLandUse	LotAcreage	0.21	0.85
tblLandUse	LotAcreage	0.28	0.84
tblProjectCharacteristics	CO2IntensityFactor	641.35	210
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	1,150.00	50.00
tblVehicleTrips	DV_TP	35.50	0.00

tblVehicleTrips	PB_TP	17.00	34.00
tblVehicleTrips	PR_TP	47.50	66.00
tblVehicleTrips	ST_TR	71.07	78.81
tblVehicleTrips	SU_TR	56.36	62.49
tblVehicleTrips	WD_TR	57.24	63.47
tblWater	AerobicPercent	87.46	0.00
tblWater	AerobicPercent	87.46	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	100.00
tblWater	SepticTankPercent	10.33	100.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.1056	18.3783	13.7609	0.0241	6.4320	0.8217	7.2537	3.0381	0.7720	3.7940	0.0000	2,208.7459	2,208.7459	0.5424	0.0000	2,218.1656
2021	36.8185	14.0951	13.4199	0.0241	0.1661	0.6863	0.8128	0.0440	0.6627	0.6968	0.0000	2,204.5770	2,204.5770	0.4157	0.0000	2,213.6261
Maximum	**36.8185**	**18.3783**	**13.7609**	**0.0241**	**6.4320**	**0.8217**	**7.2537**	**3.0381**	**0.7720**	**3.7940**	**0.0000**	**2,208.7459**	**2,208.7459**	**0.5424**	**0.0000**	**2,218.1656**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.1056	18.3783	13.7609	0.0241	6.4320	0.8217	7.2537	3.0381	0.7720	3.7940	0.0000	2,208.7459	2,208.7459	0.5424	0.0000	2,218.1656
2021	36.8185	14.0951	13.4199	0.0241	0.1661	0.6863	0.8128	0.0440	0.6627	0.6968	0.0000	2,204.5770	2,204.5770	0.4157	0.0000	2,213.6261
Maximum	**36.8185**	**18.3783**	**13.7609**	**0.0241**	**6.4320**	**0.8217**	**7.2537**	**3.0381**	**0.7720**	**3.7940**	**0.0000**	**2,208.7459**	**2,208.7459**	**0.5424**	**0.0000**	**2,218.1656**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2597	4.0000e-005	4.1000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7800e-003	8.7800e-003	2.0000e-005		9.3500e-003
Energy	1.9400e-003	0.0176	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003		21.1478	21.1478	4.1000e-004	3.9000e-004	21.2735
Mobile	1.3859	3.3196	11.7588	0.0324	2.7870	0.0316	2.8186	0.7447	0.0295	0.7743		3,245.4716	3,245.4716	0.1065		3,248.1328
Total	**1.6475**	**3.3372**	**11.7777**	**0.0325**	**2.7870**	**0.0329**	**2.8199**	**0.7447**	**0.0309**	**0.7756**		**3,266.6282**	**3,266.6282**	**0.1069**	**3.9000e-004**	**3,269.4156**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2597	4.0000e-005	4.1000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7800e-003	8.7800e-003	2.0000e-005		9.3500e-003
Energy	1.9400e-003	0.0176	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003		21.1478	21.1478	4.1000e-004	3.9000e-004	21.2735
Mobile	1.3859	3.3196	11.7588	0.0324	2.7870	0.0316	2.8186	0.7447	0.0295	0.7743		3,245.4716	3,245.4716	0.1065		3,248.1328
Total	**1.6475**	**3.3372**	**11.7777**	**0.0325**	**2.7870**	**0.0329**	**2.8199**	**0.7447**	**0.0309**	**0.7756**		**3,266.6282**	**3,266.6282**	**0.1069**	**3.9000e-004**	**3,269.4156**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/1/2020	9/2/2020	5	2	
2	Grading	Grading	9/3/2020	9/16/2020	5	10	
3	Building Construction	Building Construction	9/17/2020	2/18/2021	5	111	
4	Paving	Paving	2/19/2021	2/26/2021	5	6	
5	Architectural Coating	Architectural Coating	2/27/2021	3/8/2021	5	6	

Acres of Grading (Site Preparation Phase): 2

Acres of Grading (Grading Phase): 2

Acres of Paving: 0.84

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 13,650; Non-Residential Outdoor: 4,550; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41

Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	50.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	8.00	4.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3298	0.0000	6.3298	3.0110	0.0000	3.0110			0.0000			0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553		1,667.4119	1,667.4119	0.5393		1,680.8937
Total	**1.6299**	**18.3464**	**7.7093**	**0.0172**	**6.3298**	**0.8210**	**7.1508**	**3.0110**	**0.7553**	**3.7662**		**1,667.4119**	**1,667.4119**	**0.5393**		**1,680.8937**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0593	0.0319	0.4209	1.0400e-003	0.1022	7.4000e-004	0.1029	0.0271	6.8000e-004	0.0278		103.7289	103.7289	3.1700e-003		103.8081
Total	**0.0593**	**0.0319**	**0.4209**	**1.0400e-003**	**0.1022**	**7.4000e-004**	**0.1029**	**0.0271**	**6.8000e-004**	**0.0278**		**103.7289**	**103.7289**	**3.1700e-003**		**103.8081**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3298	0.0000	6.3298	3.0110	0.0000	3.0110			0.0000			0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553	0.0000	1,667.4119	1,667.4119	0.5393		1,680.8937
Total	**1.6299**	**18.3464**	**7.7093**	**0.0172**	**6.3298**	**0.8210**	**7.1508**	**3.0110**	**0.7553**	**3.7662**	**0.0000**	**1,667.4119**	**1,667.4119**	**0.5393**		**1,680.8937**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Worker	0.0593	0.0319	0.4209	1.0400e-003	0.1022	7.4000e-004	0.1029	0.0271	6.8000e-004	0.0278		103.7289	103.7289	3.1700e-003		103.8081
Total	**0.0593**	**0.0319**	**0.4209**	**1.0400e-003**	**0.1022**	**7.4000e-004**	**0.1029**	**0.0271**	**6.8000e-004**	**0.0278**		**103.7289**	**103.7289**	**3.1700e-003**		**103.8081**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.8644	0.0000	4.8644	2.5261	0.0000	2.5261			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296		1,365.7183	1,365.7183	0.4417		1,376.7609
Total	**1.3498**	**15.0854**	**6.4543**	**0.0141**	**4.8644**	**0.6844**	**5.5488**	**2.5261**	**0.6296**	**3.1558**		**1,365.7183**	**1,365.7183**	**0.4417**		**1,376.7609**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0432	1.6552	0.4757	4.1100e-003	0.0862	6.7300e-003	0.0930	0.0235	6.4400e-003	0.0300		429.5390	429.5390	5.3400e-003		429.6725
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0593	0.0319	0.4209	1.0400e-003	0.1022	7.4000e-004	0.1029	0.0271	6.8000e-004	0.0278		103.7289	103.7289	3.1700e-003		103.8081
Total	**0.1026**	**1.6871**	**0.8966**	**5.1500e-003**	**0.1884**	**7.4700e-003**	**0.1959**	**0.0506**	**7.1200e-003**	**0.0578**		**533.2679**	**533.2679**	**8.5100e-003**		**533.4805**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.8644	0.0000	4.8644	2.5261	0.0000	2.5261			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296	0.0000	1,365.7183	1,365.7183	0.4417		1,376.7609
Total	**1.3498**	**15.0854**	**6.4543**	**0.0141**	**4.8644**	**0.6844**	**5.5488**	**2.5261**	**0.6296**	**3.1558**	**0.0000**	**1,365.7183**	**1,365.7183**	**0.4417**		**1,376.7609**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0432	1.6552	0.4757	4.1100e-003	0.0862	6.7300e-003	0.0930	0.0235	6.4400e-003	0.0300		429.5390	429.5390	5.3400e-003		429.6725
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0593	0.0319	0.4209	1.0400e-003	0.1022	7.4000e-004	0.1029	0.0271	6.8000e-004	0.0278		103.7289	103.7289	3.1700e-003		103.8081
Total	**0.1026**	**1.6871**	**0.8966**	**5.1500e-003**	**0.1884**	**7.4700e-003**	**0.1959**	**0.0506**	**7.1200e-003**	**0.0578**		**533.2679**	**533.2679**	**8.5100e-003**		**533.4805**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.1595	2,001.1595	0.3715		2,010.4467

Total	**2.0305**	**14.7882**	**13.1881**	**0.0220**		**0.7960**	**0.7960**		**0.7688**	**0.7688**		**2,001.1595**	**2,001.1595**	**0.3715**		**2,010.4467**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0158	0.4706	0.1520	9.9000e-004	0.0243	2.6200e-003	0.0270	7.0000e-003	2.5100e-003	9.5100e-003		103.8575	103.8575	2.1300e-003		103.9108
Worker	0.0593	0.0319	0.4209	1.0400e-003	0.1022	7.4000e-004	0.1029	0.0271	6.8000e-004	0.0278		103.7289	103.7289	3.1700e-003		103.8081
Total	**0.0751**	**0.5025**	**0.5729**	**2.0300e-003**	**0.1265**	**3.3600e-003**	**0.1299**	**0.0341**	**3.1900e-003**	**0.0373**		**207.5864**	**207.5864**	**5.3000e-003**		**207.7189**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467
Total	**2.0305**	**14.7882**	**13.1881**	**0.0220**		**0.7960**	**0.7960**		**0.7688**	**0.7688**	**0.0000**	**2,001.1595**	**2,001.1595**	**0.3715**		**2,010.4467**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0158	0.4706	0.1520	9.9000e-004	0.0243	2.6200e-003	0.0270	7.0000e-003	2.5100e-003	9.5100e-003		103.8575	103.8575	2.1300e-003		103.9108
Worker	0.0593	0.0319	0.4209	1.0400e-003	0.1022	7.4000e-004	0.1029	0.0271	6.8000e-004	0.0278		103.7289	103.7289	3.1700e-003		103.8081
Total	**0.0751**	**0.5025**	**0.5729**	**2.0300e-003**	**0.1265**	**3.3600e-003**	**0.1299**	**0.0341**	**3.1900e-003**	**0.0373**		**207.5864**	**207.5864**	**5.3000e-003**		**207.7189**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**		**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.0129	0.4304	0.1357	9.9000e-004	0.0243	1.2500e-003	0.0256	7.0000e-003	1.2000e-003	8.2000e-003		103.1503	103.1503	1.8600e-003		103.1968
Worker	0.0559	0.0287	0.3848	1.0100e-003	0.1022	7.2000e-004	0.1029	0.0271	6.6000e-004	0.0278		100.2067	100.2067	2.8400e-003		100.2776
Total	**0.0688**	**0.4591**	**0.5205**	**2.0000e-003**	**0.1265**	**1.9700e-003**	**0.1285**	**0.0341**	**1.8600e-003**	**0.0360**		**203.3570**	**203.3570**	**4.7000e-003**		**203.4744**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**	**0.0000**	**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0129	0.4304	0.1357	9.9000e-004	0.0243	1.2500e-003	0.0256	7.0000e-003	1.2000e-003	8.2000e-003		103.1503	103.1503	1.8600e-003		103.1968
Worker	0.0559	0.0287	0.3848	1.0100e-003	0.1022	7.2000e-004	0.1029	0.0271	6.6000e-004	0.0278		100.2067	100.2067	2.8400e-003		100.2776
Total	**0.0688**	**0.4591**	**0.5205**	**2.0000e-003**	**0.1265**	**1.9700e-003**	**0.1285**	**0.0341**	**1.8600e-003**	**0.0360**		**203.3570**	**203.3570**	**4.7000e-003**		**203.4744**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830		1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.3668					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1407**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**		**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0909	0.0466	0.6253	1.6400e-003	0.1661	1.1600e-003	0.1672	0.0440	1.0700e-003	0.0451		162.8358	162.8358	4.6100e-003		162.9511
Total	**0.0909**	**0.0466**	**0.6253**	**1.6400e-003**	**0.1661**	**1.1600e-003**	**0.1672**	**0.0440**	**1.0700e-003**	**0.0451**		**162.8358**	**162.8358**	**4.6100e-003**		**162.9511**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830	0.0000	1,296.8664	1,296.8664	0.4111		1,307.1442

Paving	0.3668					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1407**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**	**0.0000**	**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0909	0.0466	0.6253	1.6400e-003	0.1661	1.1600e-003	0.1672	0.0440	1.0700e-003	0.0451		162.8358	162.8358	4.6100e-003		162.9511
Total	**0.0909**	**0.0466**	**0.6253**	**1.6400e-003**	**0.1661**	**1.1600e-003**	**0.1672**	**0.0440**	**1.0700e-003**	**0.0451**		**162.8358**	**162.8358**	**4.6100e-003**		**162.9511**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	36.5856					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**36.8045**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0140	7.1700e-003	0.0962	2.5000e-004	0.0256	1.8000e-004	0.0257	6.7700e-003	1.6000e-004	6.9400e-003		25.0517	25.0517	7.1000e-004		25.0694
Total	**0.0140**	**7.1700e-003**	**0.0962**	**2.5000e-004**	**0.0256**	**1.8000e-004**	**0.0257**	**6.7700e-003**	**1.6000e-004**	**6.9400e-003**		**25.0517**	**25.0517**	**7.1000e-004**		**25.0694**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	36.5856					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**36.8045**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0140	7.1700e-003	0.0962	2.5000e-004	0.0256	1.8000e-004	0.0257	6.7700e-003	1.6000e-004	6.9400e-003		25.0517	25.0517	7.1000e-004		25.0694
Total	**0.0140**	**7.1700e-003**	**0.0962**	**2.5000e-004**	**0.0256**	**1.8000e-004**	**0.0257**	**6.7700e-003**	**1.6000e-004**	**6.9400e-003**		**25.0517**	**25.0517**	**7.1000e-004**		**25.0694**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.3859	3.3196	11.7588	0.0324	2.7870	0.0316	2.8186	0.7447	0.0295	0.7743		3,245.4716	3,245.4716	0.1065		3,248.1328
Unmitigated	1.3859	3.3196	11.7588	0.0324	2.7870	0.0316	2.8186	0.7447	0.0295	0.7743		3,245.4716	3,245.4716	0.1065		3,248.1328

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Free-Standing Discount Store	577.58	717.17	568.66	1,094,327	1,094,327
Parking Lot	0.00	0.00	0.00		
Total	577.58	717.17	568.66	1,094,327	1,094,327

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Free-Standing Discount Store	14.70	6.60	6.60	12.20	68.80	19.00	66	0	34
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Free-Standing Discount Store	0.529528	0.038650	0.225199	0.133619	0.030041	0.006237	0.016842	0.009530	0.001608	0.001127	0.005339	0.000802	0.001479
Parking Lot	0.529528	0.038650	0.225199	0.133619	0.030041	0.006237	0.016842	0.009530	0.001608	0.001127	0.005339	0.000802	0.001479

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.9400e-003	0.0176	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003		21.1478	21.1478	4.1000e-004	3.9000e-004	21.2735
NaturalGas Unmitigated	1.9400e-003	0.0176	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003		21.1478	21.1478	4.1000e-004	3.9000e-004	21.2735

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Free-Standing Discount Store	179.756	1.9400e-003	0.0176	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003		21.1478	21.1478	4.1000e-004	3.9000e-004	21.2735
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Total		**1.9400e-003**	**0.0176**	**0.0148**	**1.1000e-004**		**1.3400e-003**	**1.3400e-003**		**1.3400e-003**	**1.3400e-003**		**21.1478**	**21.1478**	**4.1000e-004**	**3.9000e-004**	**21.2735**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Free-Standing Discount Store	0.179756	1.9400e-003	0.0176	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003		21.1478	21.1478	4.1000e-004	3.9000e-004	21.2735
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.9400e-003**	**0.0176**	**0.0148**	**1.1000e-004**		**1.3400e-003**	**1.3400e-003**		**1.3400e-003**	**1.3400e-003**		**21.1478**	**21.1478**	**4.1000e-004**	**3.9000e-004**	**21.2735**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2597	4.0000e-005	4.1000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7800e-003	8.7800e-003	2.0000e-005		9.3500e-003
Unmitigated	0.2597	4.0000e-005	4.1000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7800e-003	8.7800e-003	2.0000e-005		9.3500e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0601					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1991					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.8000e-004	4.0000e-005	4.1000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7800e-003	8.7800e-003	2.0000e-005		9.3500e-003
Total	**0.2597**	**4.0000e-005**	**4.1000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.7800e-003**	**8.7800e-003**	**2.0000e-005**		**9.3500e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0601					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1991					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.8000e-004	4.0000e-005	4.1000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7800e-003	8.7800e-003	2.0000e-005		9.3500e-003
Total	**0.2597**	**4.0000e-005**	**4.1000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.7800e-003**	**8.7800e-003**	**2.0000e-005**		**9.3500e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Dollar General - Cool CA - El Dorado-Mountain County County, Winter

Dollar General - Cool CA

El Dorado-Mountain County County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Free-Standing Discount Store	9.10	1000sqft	0.85	9,100.00	0
Parking Lot	31.00	Space	0.84	12,400.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	70
Climate Zone	1			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	210	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 was adjusted based PG&E's reported intensity for 2017 from the PG&E Corporate Responsibility and Sustainability Report (2019)

Land Use - 9.1 ksf Dollar General store and 31-space parking lot on 1.69-acres

Construction Phase - Construction duration anticipated at 135 days

Off-road Equipment - Default

Grading - Earthwork: 4,800 CY excavated, 4,400 CY balanced, 400 CY exported

Demolition - No demolition

Trips and VMT - 400 CY of net soil export would equate to 25 roundtrips (16 CY trucks), or 50 one-way trips total

On-road Fugitive Dust - Default

Architectural Coating - Default

Vehicle Trips - Adjusted weekday trip generation rate to match traffic report. Adjusted Saturday and Sunday trip generation proportionally to weekday change. 34% trips would be pass-by per traffic report

Energy Use - Default

Water And Wastewater - Default water use. 100% septic system would be used for wastewater

Solid Waste - Default

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	6.00
tblConstructionPhase	NumDays	200.00	111.00
tblConstructionPhase	NumDays	4.00	10.00
tblConstructionPhase	NumDays	10.00	6.00
tblConstructionPhase	PhaseEndDate	8/10/2021	3/8/2021
tblConstructionPhase	PhaseEndDate	7/13/2021	2/18/2021
tblConstructionPhase	PhaseEndDate	10/6/2020	9/16/2020
tblConstructionPhase	PhaseEndDate	7/27/2021	2/26/2021
tblConstructionPhase	PhaseEndDate	9/30/2020	9/2/2020
tblConstructionPhase	PhaseStartDate	7/28/2021	2/27/2021
tblConstructionPhase	PhaseStartDate	10/7/2020	9/17/2020
tblConstructionPhase	PhaseStartDate	10/1/2020	9/3/2020
tblConstructionPhase	PhaseStartDate	7/14/2021	2/19/2021
tblConstructionPhase	PhaseStartDate	9/29/2020	9/1/2020
tblGrading	AcresOfGrading	3.75	2.00
tblGrading	AcresOfGrading	1.00	2.00
tblGrading	MaterialExported	0.00	4,800.00
tblGrading	MaterialImported	0.00	4,400.00
tblLandUse	LotAcreage	0.21	0.85
tblLandUse	LotAcreage	0.28	0.84
tblProjectCharacteristics	CO2IntensityFactor	641.35	210
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	1,150.00	50.00
tblVehicleTrips	DV_TP	35.50	0.00

tblVehicleTrips	PB_TP	17.00	34.00
tblVehicleTrips	PR_TP	47.50	66.00
tblVehicleTrips	ST_TR	71.07	78.81
tblVehicleTrips	SU_TR	56.36	62.49
tblVehicleTrips	WD_TR	57.24	63.47
tblWater	AerobicPercent	87.46	0.00
tblWater	AerobicPercent	87.46	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	100.00
tblWater	SepticTankPercent	10.33	100.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.1106	18.3858	13.7404	0.0240	6.4320	0.8217	7.2537	3.0381	0.7721	3.7940	0.0000	2,196.6940	2,196.6940	0.5422	0.0000	2,206.1114
2021	36.8195	14.1097	13.3992	0.0239	0.1661	0.6864	0.8129	0.0440	0.6627	0.6968	0.0000	2,192.8672	2,192.8672	0.4153	0.0000	2,201.9140
Maximum	**36.8195**	**18.3858**	**13.7404**	**0.0240**	**6.4320**	**0.8217**	**7.2537**	**3.0381**	**0.7721**	**3.7940**	**0.0000**	**2,196.6940**	**2,196.6940**	**0.5422**	**0.0000**	**2,206.1114**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.1106	18.3858	13.7404	0.0240	6.4320	0.8217	7.2537	3.0381	0.7721	3.7940	0.0000	2,196.6940	2,196.6940	0.5422	0.0000	2,206.1114
2021	36.8195	14.1097	13.3992	0.0239	0.1661	0.6864	0.8129	0.0440	0.6627	0.6968	0.0000	2,192.8672	2,192.8672	0.4153	0.0000	2,201.9140
Maximum	**36.8195**	**18.3858**	**13.7404**	**0.0240**	**6.4320**	**0.8217**	**7.2537**	**3.0381**	**0.7721**	**3.7940**	**0.0000**	**2,196.6940**	**2,196.6940**	**0.5422**	**0.0000**	**2,206.1114**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2597	4.0000e-005	4.1000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7800e-003	8.7800e-003	2.0000e-005		9.3500e-003
Energy	1.9400e-003	0.0176	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003		21.1478	21.1478	4.1000e-004	3.9000e-004	21.2735
Mobile	1.1010	3.5953	12.0161	0.0298	2.7870	0.0317	2.8187	0.7447	0.0297	0.7744		2,990.6794	2,990.6794	0.1076		2,993.3681
Total	**1.3626**	**3.6129**	**12.0350**	**0.0299**	**2.7870**	**0.0331**	**2.8201**	**0.7447**	**0.0310**	**0.7758**		**3,011.8359**	**3,011.8359**	**0.1080**	**3.9000e-004**	**3,014.6509**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2597	4.0000e-005	4.1000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7800e-003	8.7800e-003	2.0000e-005		9.3500e-003
Energy	1.9400e-003	0.0176	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003		21.1478	21.1478	4.1000e-004	3.9000e-004	21.2735
Mobile	1.1010	3.5953	12.0161	0.0298	2.7870	0.0317	2.8187	0.7447	0.0297	0.7744		2,990.6794	2,990.6794	0.1076		2,993.3681
Total	**1.3626**	**3.6129**	**12.0350**	**0.0299**	**2.7870**	**0.0331**	**2.8201**	**0.7447**	**0.0310**	**0.7758**		**3,011.8359**	**3,011.8359**	**0.1080**	**3.9000e-004**	**3,014.6509**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/1/2020	9/2/2020	5	2	
2	Grading	Grading	9/3/2020	9/16/2020	5	10	
3	Building Construction	Building Construction	9/17/2020	2/18/2021	5	111	
4	Paving	Paving	2/19/2021	2/26/2021	5	6	
5	Architectural Coating	Architectural Coating	2/27/2021	3/8/2021	5	6	

Acres of Grading (Site Preparation Phase): 2

Acres of Grading (Grading Phase): 2

Acres of Paving: 0.84

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 13,650; Non-Residential Outdoor: 4,550; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41

Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	50.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	8.00	4.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3298	0.0000	6.3298	3.0110	0.0000	3.0110			0.0000			0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553		1,667.4119	1,667.4119	0.5393		1,680.8937
Total	**1.6299**	**18.3464**	**7.7093**	**0.0172**	**6.3298**	**0.8210**	**7.1508**	**3.0110**	**0.7553**	**3.7662**		**1,667.4119**	**1,667.4119**	**0.5393**		**1,680.8937**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0635	0.0394	0.3795	9.4000e-004	0.1022	7.4000e-004	0.1029	0.0271	6.8000e-004	0.0278		93.6794	93.6794	2.8800e-003		93.7514
Total	**0.0635**	**0.0394**	**0.3795**	**9.4000e-004**	**0.1022**	**7.4000e-004**	**0.1029**	**0.0271**	**6.8000e-004**	**0.0278**		**93.6794**	**93.6794**	**2.8800e-003**		**93.7514**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3298	0.0000	6.3298	3.0110	0.0000	3.0110			0.0000			0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553	0.0000	1,667.4119	1,667.4119	0.5393		1,680.8937
Total	**1.6299**	**18.3464**	**7.7093**	**0.0172**	**6.3298**	**0.8210**	**7.1508**	**3.0110**	**0.7553**	**3.7662**	**0.0000**	**1,667.4119**	**1,667.4119**	**0.5393**		**1,680.8937**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Worker	0.0635	0.0394	0.3795	9.4000e-004	0.1022	7.4000e-004	0.1029	0.0271	6.8000e-004	0.0278		93.6794	93.6794	2.8800e-003		93.7514
Total	**0.0635**	**0.0394**	**0.3795**	**9.4000e-004**	**0.1022**	**7.4000e-004**	**0.1029**	**0.0271**	**6.8000e-004**	**0.0278**		**93.6794**	**93.6794**	**2.8800e-003**		**93.7514**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.8644	0.0000	4.8644	2.5261	0.0000	2.5261			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296		1,365.7183	1,365.7183	0.4417		1,376.7609
Total	**1.3498**	**15.0854**	**6.4543**	**0.0141**	**4.8644**	**0.6844**	**5.5488**	**2.5261**	**0.6296**	**3.1558**		**1,365.7183**	**1,365.7183**	**0.4417**		**1,376.7609**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0443	1.7120	0.4968	4.0600e-003	0.0862	6.8500e-003	0.0931	0.0235	6.5600e-003	0.0301		424.7974	424.7974	5.6200e-003		424.9379
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0635	0.0394	0.3795	9.4000e-004	0.1022	7.4000e-004	0.1029	0.0271	6.8000e-004	0.0278		93.6794	93.6794	2.8800e-003		93.7514
Total	**0.1078**	**1.7514**	**0.8762**	**5.0000e-003**	**0.1884**	**7.5900e-003**	**0.1960**	**0.0506**	**7.2400e-003**	**0.0579**		**518.4768**	**518.4768**	**8.5000e-003**		**518.6893**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.8644	0.0000	4.8644	2.5261	0.0000	2.5261			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296	0.0000	1,365.7183	1,365.7183	0.4417		1,376.7609
Total	**1.3498**	**15.0854**	**6.4543**	**0.0141**	**4.8644**	**0.6844**	**5.5488**	**2.5261**	**0.6296**	**3.1558**	**0.0000**	**1,365.7183**	**1,365.7183**	**0.4417**		**1,376.7609**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0443	1.7120	0.4968	4.0600e-003	0.0862	6.8500e-003	0.0931	0.0235	6.5600e-003	0.0301		424.7974	424.7974	5.6200e-003		424.9379
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0635	0.0394	0.3795	9.4000e-004	0.1022	7.4000e-004	0.1029	0.0271	6.8000e-004	0.0278		93.6794	93.6794	2.8800e-003		93.7514
Total	**0.1078**	**1.7514**	**0.8762**	**5.0000e-003**	**0.1884**	**7.5900e-003**	**0.1960**	**0.0506**	**7.2400e-003**	**0.0579**		**518.4768**	**518.4768**	**8.5000e-003**		**518.6893**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.1595	2,001.1595	0.3715		2,010.4467

Total	**2.0305**	**14.7882**	**13.1881**	**0.0220**		**0.7960**	**0.7960**		**0.7688**	**0.7688**		**2,001.1595**	**2,001.1595**	**0.3715**		**2,010.4467**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0166	0.4802	0.1729	9.8000e-004	0.0243	2.6800e-003	0.0270	7.0000e-003	2.5600e-003	9.5600e-003		101.8551	101.8551	2.3200e-003		101.9132
Worker	0.0635	0.0394	0.3795	9.4000e-004	0.1022	7.4000e-004	0.1029	0.0271	6.8000e-004	0.0278		93.6794	93.6794	2.8800e-003		93.7514
Total	**0.0801**	**0.5196**	**0.5523**	**1.9200e-003**	**0.1265**	**3.4200e-003**	**0.1300**	**0.0341**	**3.2400e-003**	**0.0373**		**195.5345**	**195.5345**	**5.2000e-003**		**195.6646**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467
Total	**2.0305**	**14.7882**	**13.1881**	**0.0220**		**0.7960**	**0.7960**		**0.7688**	**0.7688**	**0.0000**	**2,001.1595**	**2,001.1595**	**0.3715**		**2,010.4467**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0166	0.4802	0.1729	9.8000e-004	0.0243	2.6800e-003	0.0270	7.0000e-003	2.5600e-003	9.5600e-003		101.8551	101.8551	2.3200e-003		101.9132
Worker	0.0635	0.0394	0.3795	9.4000e-004	0.1022	7.4000e-004	0.1029	0.0271	6.8000e-004	0.0278		93.6794	93.6794	2.8800e-003		93.7514
Total	**0.0801**	**0.5196**	**0.5523**	**1.9200e-003**	**0.1265**	**3.4200e-003**	**0.1300**	**0.0341**	**3.2400e-003**	**0.0373**		**195.5345**	**195.5345**	**5.2000e-003**		**195.6646**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**		**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.0137	0.4382	0.1548	9.7000e-004	0.0243	1.3000e-003	0.0256	7.0000e-003	1.2500e-003	8.2400e-003		101.1515	101.1515	2.0300e-003		101.2023
Worker	0.0599	0.0354	0.3451	9.1000e-004	0.1022	7.2000e-004	0.1029	0.0271	6.6000e-004	0.0278		90.4957	90.4957	2.5700e-003		90.5600
Total	**0.0736**	**0.4736**	**0.4999**	**1.8800e-003**	**0.1265**	**2.0200e-003**	**0.1285**	**0.0341**	**1.9100e-003**	**0.0360**		**191.6472**	**191.6472**	**4.6000e-003**		**191.7623**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517
Total	**1.8125**	**13.6361**	**12.8994**	**0.0221**		**0.6843**	**0.6843**		**0.6608**	**0.6608**	**0.0000**	**2,001.2200**	**2,001.2200**	**0.3573**		**2,010.1517**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0137	0.4382	0.1548	9.7000e-004	0.0243	1.3000e-003	0.0256	7.0000e-003	1.2500e-003	8.2400e-003		101.1515	101.1515	2.0300e-003		101.2023
Worker	0.0599	0.0354	0.3451	9.1000e-004	0.1022	7.2000e-004	0.1029	0.0271	6.6000e-004	0.0278		90.4957	90.4957	2.5700e-003		90.5600
Total	**0.0736**	**0.4736**	**0.4999**	**1.8800e-003**	**0.1265**	**2.0200e-003**	**0.1285**	**0.0341**	**1.9100e-003**	**0.0360**		**191.6472**	**191.6472**	**4.6000e-003**		**191.7623**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830		1,296.8664	1,296.8664	0.4111		1,307.1442
Paving	0.3668					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1407**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**		**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0974	0.0576	0.5608	1.4800e-003	0.1661	1.1600e-003	0.1672	0.0440	1.0700e-003	0.0451		147.0555	147.0555	4.1800e-003		147.1601
Total	**0.0974**	**0.0576**	**0.5608**	**1.4800e-003**	**0.1661**	**1.1600e-003**	**0.1672**	**0.0440**	**1.0700e-003**	**0.0451**		**147.0555**	**147.0555**	**4.1800e-003**		**147.1601**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7739	7.7422	8.8569	0.0135		0.4153	0.4153		0.3830	0.3830	0.0000	1,296.8664	1,296.8664	0.4111		1,307.1442

Paving	0.3668					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1407**	**7.7422**	**8.8569**	**0.0135**		**0.4153**	**0.4153**		**0.3830**	**0.3830**	**0.0000**	**1,296.8664**	**1,296.8664**	**0.4111**		**1,307.1442**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0974	0.0576	0.5608	1.4800e-003	0.1661	1.1600e-003	0.1672	0.0440	1.0700e-003	0.0451		147.0555	147.0555	4.1800e-003		147.1601
Total	**0.0974**	**0.0576**	**0.5608**	**1.4800e-003**	**0.1661**	**1.1600e-003**	**0.1672**	**0.0440**	**1.0700e-003**	**0.0451**		**147.0555**	**147.0555**	**4.1800e-003**		**147.1601**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	36.5856					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**36.8045**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0150	8.8500e-003	0.0863	2.3000e-004	0.0256	1.8000e-004	0.0257	6.7700e-003	1.6000e-004	6.9400e-003		22.6239	22.6239	6.4000e-004		22.6400
Total	**0.0150**	**8.8500e-003**	**0.0863**	**2.3000e-004**	**0.0256**	**1.8000e-004**	**0.0257**	**6.7700e-003**	**1.6000e-004**	**6.9400e-003**		**22.6239**	**22.6239**	**6.4000e-004**		**22.6400**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	36.5856					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**36.8045**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0150	8.8500e-003	0.0863	2.3000e-004	0.0256	1.8000e-004	0.0257	6.7700e-003	1.6000e-004	6.9400e-003		22.6239	22.6239	6.4000e-004		22.6400
Total	**0.0150**	**8.8500e-003**	**0.0863**	**2.3000e-004**	**0.0256**	**1.8000e-004**	**0.0257**	**6.7700e-003**	**1.6000e-004**	**6.9400e-003**		**22.6239**	**22.6239**	**6.4000e-004**		**22.6400**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.1010	3.5953	12.0161	0.0298	2.7870	0.0317	2.8187	0.7447	0.0297	0.7744		2,990.6794	2,990.6794	0.1076		2,993.3681
Unmitigated	1.1010	3.5953	12.0161	0.0298	2.7870	0.0317	2.8187	0.7447	0.0297	0.7744		2,990.6794	2,990.6794	0.1076		2,993.3681

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Free-Standing Discount Store	577.58	717.17	568.66	1,094,327	1,094,327
Parking Lot	0.00	0.00	0.00		
Total	577.58	717.17	568.66	1,094,327	1,094,327

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Free-Standing Discount Store	14.70	6.60	6.60	12.20	68.80	19.00	66	0	34
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Free-Standing Discount Store	0.529528	0.038650	0.225199	0.133619	0.030041	0.006237	0.016842	0.009530	0.001608	0.001127	0.005339	0.000802	0.001479
Parking Lot	0.529528	0.038650	0.225199	0.133619	0.030041	0.006237	0.016842	0.009530	0.001608	0.001127	0.005339	0.000802	0.001479

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.9400e-003	0.0176	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003		21.1478	21.1478	4.1000e-004	3.9000e-004	21.2735
NaturalGas Unmitigated	1.9400e-003	0.0176	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003		21.1478	21.1478	4.1000e-004	3.9000e-004	21.2735

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Free-Standing Discount Store	179.756	1.9400e-003	0.0176	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003		21.1478	21.1478	4.1000e-004	3.9000e-004	21.2735
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Total		**1.9400e-003**	**0.0176**	**0.0148**	**1.1000e-004**		**1.3400e-003**	**1.3400e-003**		**1.3400e-003**	**1.3400e-003**		**21.1478**	**21.1478**	**4.1000e-004**	**3.9000e-004**	**21.2735**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Free-Standing Discount Store	0.179756	1.9400e-003	0.0176	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003		21.1478	21.1478	4.1000e-004	3.9000e-004	21.2735
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.9400e-003**	**0.0176**	**0.0148**	**1.1000e-004**		**1.3400e-003**	**1.3400e-003**		**1.3400e-003**	**1.3400e-003**		**21.1478**	**21.1478**	**4.1000e-004**	**3.9000e-004**	**21.2735**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2597	4.0000e-005	4.1000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7800e-003	8.7800e-003	2.0000e-005		9.3500e-003
Unmitigated	0.2597	4.0000e-005	4.1000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7800e-003	8.7800e-003	2.0000e-005		9.3500e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0601					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1991					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.8000e-004	4.0000e-005	4.1000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7800e-003	8.7800e-003	2.0000e-005		9.3500e-003
Total	**0.2597**	**4.0000e-005**	**4.1000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.7800e-003**	**8.7800e-003**	**2.0000e-005**		**9.3500e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0601					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1991					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.8000e-004	4.0000e-005	4.1000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7800e-003	8.7800e-003	2.0000e-005		9.3500e-003
Total	**0.2597**	**4.0000e-005**	**4.1000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.7800e-003**	**8.7800e-003**	**2.0000e-005**		**9.3500e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Dollar General - Cool CA

El Dorado-Mountain County County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Free-Standing Discount Store	9.10	1000sqft	0.85	9,100.00	0
Parking Lot	31.00	Space	0.84	12,400.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	70
Climate Zone	1			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	210	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 was adjusted based PG&E's reported intensity for 2017 from the PG&E Corporate Responsibility and Sustainability Report (2019)

Land Use - 9.1 ksf Dollar General store and 31-space parking lot on 1.69-acres

Construction Phase - Construction duration anticipated at 135 days

Off-road Equipment - Default

Grading - Earthwork: 4,800 CY excavated, 4,400 CY balanced, 400 CY exported

Demolition - No demolition

Trips and VMT - 400 CY of net soil export would equate to 25 roundtrips (16 CY trucks), or 50 one-way trips total

On-road Fugitive Dust - Default

Architectural Coating - Default

Vehicle Trips - Adjusted weekday trip generation rate to match traffic report. Adjusted Saturday and Sunday trip generation proportionally to weekday change. 34% trips would be pass-by per traffic report

Energy Use - Default

Water And Wastewater - Default water use. 100% septic system would be used for wastewater

Solid Waste - Default

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	6.00
tblConstructionPhase	NumDays	200.00	111.00
tblConstructionPhase	NumDays	4.00	10.00
tblConstructionPhase	NumDays	10.00	6.00
tblConstructionPhase	PhaseEndDate	8/10/2021	3/8/2021
tblConstructionPhase	PhaseEndDate	7/13/2021	2/18/2021
tblConstructionPhase	PhaseEndDate	10/6/2020	9/16/2020
tblConstructionPhase	PhaseEndDate	7/27/2021	2/26/2021
tblConstructionPhase	PhaseEndDate	9/30/2020	9/2/2020
tblConstructionPhase	PhaseStartDate	7/28/2021	2/27/2021
tblConstructionPhase	PhaseStartDate	10/7/2020	9/17/2020
tblConstructionPhase	PhaseStartDate	10/1/2020	9/3/2020
tblConstructionPhase	PhaseStartDate	7/14/2021	2/19/2021
tblConstructionPhase	PhaseStartDate	9/29/2020	9/1/2020
tblGrading	AcresOfGrading	3.75	2.00
tblGrading	AcresOfGrading	1.00	2.00
tblGrading	MaterialExported	0.00	4,800.00
tblGrading	MaterialImported	0.00	4,400.00
tblLandUse	LotAcreage	0.21	0.85
tblLandUse	LotAcreage	0.28	0.84
tblProjectCharacteristics	CO2IntensityFactor	641.35	210
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	1,150.00	50.00
tblVehicleTrips	DV_TP	35.50	0.00

tblVehicleTrips	PB_TP	17.00	34.00
tblVehicleTrips	PR_TP	47.50	66.00
tblVehicleTrips	ST_TR	71.07	78.81
tblVehicleTrips	SU_TR	56.36	62.49
tblVehicleTrips	WD_TR	57.24	63.47
tblWater	AerobicPercent	87.46	0.00
tblWater	AerobicPercent	87.46	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	100.00
tblWater	SepticTankPercent	10.33	100.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0888	0.6841	0.5664	1.0300e-003	0.0363	0.0347	0.0709	0.0172	0.0333	0.0504	0.0000	86.0034	86.0034	0.0155	0.0000	86.3914
2021	0.1470	0.2749	0.2683	4.7000e-004	2.6800e-003	0.0135	0.0162	7.2000e-004	0.0130	0.0138	0.0000	39.6297	39.6297	6.9300e-003	0.0000	39.8029
Maximum	**0.1470**	**0.6841**	**0.5664**	**1.0300e-003**	**0.0363**	**0.0347**	**0.0709**	**0.0172**	**0.0333**	**0.0504**	**0.0000**	**86.0034**	**86.0034**	**0.0155**	**0.0000**	**86.3914**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0888	0.6841	0.5664	1.0300e-003	0.0363	0.0347	0.0709	0.0172	0.0333	0.0504	0.0000	86.0034	86.0034	0.0155	0.0000	86.3913
2021	0.1470	0.2749	0.2683	4.7000e-004	2.6800e-003	0.0135	0.0162	7.2000e-004	0.0130	0.0138	0.0000	39.6297	39.6297	6.9300e-003	0.0000	39.8029
Maximum	**0.1470**	**0.6841**	**0.5664**	**1.0300e-003**	**0.0363**	**0.0347**	**0.0709**	**0.0172**	**0.0333**	**0.0504**	**0.0000**	**86.0034**	**86.0034**	**0.0155**	**0.0000**	**86.3913**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-1-2020	11-30-2020	0.5719	0.5719
2	12-1-2020	2-28-2021	0.5260	0.5260
3	3-1-2021	5-31-2021	0.1096	0.1096
		Highest	0.5719	0.5719

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0474	0.0000	3.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.2000e-004	7.2000e-004	0.0000	0.0000	7.6000e-004
Energy	3.5000e-004	3.2200e-003	2.7000e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	15.6340	15.6340	1.7400e-003	4.1000e-004	15.8000
Mobile	0.1709	0.5304	1.7431	4.5900e-003	0.4044	4.7800e-003	0.4091	0.1084	4.4700e-003	0.1129	0.0000	417.3934	417.3934	0.0145	0.0000	417.7554
Waste						0.0000	0.0000		0.0000	0.0000	7.9451	0.0000	7.9451	0.4695	0.0000	19.6836
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.4852	0.4852	0.1532	5.3000e-004	4.4729
Total	**0.2186**	**0.5337**	**1.7462**	**4.6100e-003**	**0.4044**	**5.0200e-003**	**0.4094**	**0.1084**	**4.7100e-003**	**0.1131**	**7.9451**	**433.5132**	**441.4583**	**0.6389**	**9.4000e-004**	**457.7127**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0474	0.0000	3.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.2000e-004	7.2000e-004	0.0000	0.0000	7.6000e-004
Energy	3.5000e-004	3.2200e-003	2.7000e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	15.6340	15.6340	1.7400e-003	4.1000e-004	15.8000
Mobile	0.1709	0.5304	1.7431	4.5900e-003	0.4044	4.7800e-003	0.4091	0.1084	4.4700e-003	0.1129	0.0000	417.3934	417.3934	0.0145	0.0000	417.7554
Waste						0.0000	0.0000		0.0000	0.0000	7.9451	0.0000	7.9451	0.4695	0.0000	19.6836
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.4852	0.4852	0.1532	5.3000e-004	4.4729
Total	**0.2186**	**0.5337**	**1.7462**	**4.6100e-003**	**0.4044**	**5.0200e-003**	**0.4094**	**0.1084**	**4.7100e-003**	**0.1131**	**7.9451**	**433.5132**	**441.4583**	**0.6389**	**9.4000e-004**	**457.7127**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/1/2020	9/2/2020	5	2	
2	Grading	Grading	9/3/2020	9/16/2020	5	10	
3	Building Construction	Building Construction	9/17/2020	2/18/2021	5	111	
4	Paving	Paving	2/19/2021	2/26/2021	5	6	
5	Architectural Coating	Architectural Coating	2/27/2021	3/8/2021	5	6	

Acres of Grading (Site Preparation Phase): 2

Acres of Grading (Grading Phase): 2

Acres of Paving: 0.84

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 13,650; Non-Residential Outdoor: 4,550; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40

Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	50.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	8.00	4.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.3300e-003	0.0000	6.3300e-003	3.0100e-003	0.0000	3.0100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0184	7.7100e-003	2.0000e-005		8.2000e-004	8.2000e-004		7.6000e-004	7.6000e-004	0.0000	1.5127	1.5127	4.9000e-004	0.0000	1.5249
Total	**1.6300e-003**	**0.0184**	**7.7100e-003**	**2.0000e-005**	**6.3300e-003**	**8.2000e-004**	**7.1500e-003**	**3.0100e-003**	**7.6000e-004**	**3.7700e-003**	**0.0000**	**1.5127**	**1.5127**	**4.9000e-004**	**0.0000**	**1.5249**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	3.8000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0868	0.0868	0.0000	0.0000	0.0869
Total	**6.0000e-005**	**4.0000e-005**	**3.8000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0868**	**0.0868**	**0.0000**	**0.0000**	**0.0869**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.3300e-003	0.0000	6.3300e-003	3.0100e-003	0.0000	3.0100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0184	7.7100e-003	2.0000e-005		8.2000e-004	8.2000e-004		7.6000e-004	7.6000e-004	0.0000	1.5127	1.5127	4.9000e-004	0.0000	1.5249
Total	**1.6300e-003**	**0.0184**	**7.7100e-003**	**2.0000e-005**	**6.3300e-003**	**8.2000e-004**	**7.1500e-003**	**3.0100e-003**	**7.6000e-004**	**3.7700e-003**	**0.0000**	**1.5127**	**1.5127**	**4.9000e-004**	**0.0000**	**1.5249**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	3.8000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0868	0.0868	0.0000	0.0000	0.0869

Total	**6.0000e-005**	**4.0000e-005**	**3.8000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0868**	**0.0868**	**0.0000**	**0.0000**	**0.0869**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0243	0.0000	0.0243	0.0126	0.0000	0.0126	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.7500e-003	0.0754	0.0323	7.0000e-005		3.4200e-003	3.4200e-003		3.1500e-003	3.1500e-003	0.0000	6.1948	6.1948	2.0000e-003	0.0000	6.2449
Total	**6.7500e-003**	**0.0754**	**0.0323**	**7.0000e-005**	**0.0243**	**3.4200e-003**	**0.0277**	**0.0126**	**3.1500e-003**	**0.0158**	**0.0000**	**6.1948**	**6.1948**	**2.0000e-003**	**0.0000**	**6.2449**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.2000e-004	8.5300e-003	2.4300e-003	2.0000e-005	4.2000e-004	3.0000e-005	4.5000e-004	1.1000e-004	3.0000e-005	1.5000e-004	0.0000	1.9393	1.9393	2.0000e-005	0.0000	1.9399
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.8000e-004	1.9000e-003	0.0000	4.9000e-004	0.0000	4.9000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4340	0.4340	1.0000e-005	0.0000	0.4344
Total	**5.0000e-004**	**8.7100e-003**	**4.3300e-003**	**2.0000e-005**	**9.1000e-004**	**3.0000e-005**	**9.4000e-004**	**2.4000e-004**	**3.0000e-005**	**2.8000e-004**	**0.0000**	**2.3733**	**2.3733**	**3.0000e-005**	**0.0000**	**2.3743**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0243	0.0000	0.0243	0.0126	0.0000	0.0126	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.7500e-003	0.0754	0.0323	7.0000e-005		3.4200e-003	3.4200e-003		3.1500e-003	3.1500e-003	0.0000	6.1948	6.1948	2.0000e-003	0.0000	6.2449
Total	**6.7500e-003**	**0.0754**	**0.0323**	**7.0000e-005**	**0.0243**	**3.4200e-003**	**0.0277**	**0.0126**	**3.1500e-003**	**0.0158**	**0.0000**	**6.1948**	**6.1948**	**2.0000e-003**	**0.0000**	**6.2449**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.2000e-004	8.5300e-003	2.4300e-003	2.0000e-005	4.2000e-004	3.0000e-005	4.5000e-004	1.1000e-004	3.0000e-005	1.5000e-004	0.0000	1.9393	1.9393	2.0000e-005	0.0000	1.9399
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.8000e-004	1.9000e-003	0.0000	4.9000e-004	0.0000	4.9000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4340	0.4340	1.0000e-005	0.0000	0.4344
Total	**5.0000e-004**	**8.7100e-003**	**4.3300e-003**	**2.0000e-005**	**9.1000e-004**	**3.0000e-005**	**9.4000e-004**	**2.4000e-004**	**3.0000e-005**	**2.8000e-004**	**0.0000**	**2.3733**	**2.3733**	**3.0000e-005**	**0.0000**	**2.3743**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0772	0.5620	0.5012	8.4000e-004		0.0303	0.0303		0.0292	0.0292	0.0000	68.9860	68.9860	0.0128	0.0000	69.3062
Total	**0.0772**	**0.5620**	**0.5012**	**8.4000e-004**		**0.0303**	**0.0303**		**0.0292**	**0.0292**	**0.0000**	**68.9860**	**68.9860**	**0.0128**	**0.0000**	**69.3062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.1000e-004	0.0183	6.2000e-003	4.0000e-005	8.9000e-004	1.0000e-004	9.9000e-004	2.6000e-004	1.0000e-004	3.5000e-004	0.0000	3.5513	3.5513	8.0000e-005	0.0000	3.5532
Worker	2.1400e-003	1.3800e-003	0.0144	4.0000e-005	3.7200e-003	3.0000e-005	3.7500e-003	9.9000e-004	3.0000e-005	1.0200e-003	0.0000	3.2986	3.2986	1.0000e-004	0.0000	3.3011
Total	**2.7500e-003**	**0.0197**	**0.0206**	**8.0000e-005**	**4.6100e-003**	**1.3000e-004**	**4.7400e-003**	**1.2500e-003**	**1.3000e-004**	**1.3700e-003**	**0.0000**	**6.8498**	**6.8498**	**1.8000e-004**	**0.0000**	**6.8543**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0772	0.5620	0.5012	8.4000e-004		0.0303	0.0303		0.0292	0.0292	0.0000	68.9859	68.9859	0.0128	0.0000	69.3061
Total	**0.0772**	**0.5620**	**0.5012**	**8.4000e-004**		**0.0303**	**0.0303**		**0.0292**	**0.0292**	**0.0000**	**68.9859**	**68.9859**	**0.0128**	**0.0000**	**69.3061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.1000e-004	0.0183	6.2000e-003	4.0000e-005	8.9000e-004	1.0000e-004	9.9000e-004	2.6000e-004	1.0000e-004	3.5000e-004	0.0000	3.5513	3.5513	8.0000e-005	0.0000	3.5532
Worker	2.1400e-003	1.3800e-003	0.0144	4.0000e-005	3.7200e-003	3.0000e-005	3.7500e-003	9.9000e-004	3.0000e-005	1.0200e-003	0.0000	3.2986	3.2986	1.0000e-004	0.0000	3.3011
Total	**2.7500e-003**	**0.0197**	**0.0206**	**8.0000e-005**	**4.6100e-003**	**1.3000e-004**	**4.7400e-003**	**1.2500e-003**	**1.3000e-004**	**1.3700e-003**	**0.0000**	**6.8498**	**6.8498**	**1.8000e-004**	**0.0000**	**6.8543**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0317	0.2386	0.2257	3.9000e-004		0.0120	0.0120		0.0116	0.0116	0.0000	31.7708	31.7708	5.6700e-003	0.0000	31.9126
Total	**0.0317**	**0.2386**	**0.2257**	**3.9000e-004**		**0.0120**	**0.0120**		**0.0116**	**0.0116**	**0.0000**	**31.7708**	**31.7708**	**5.6700e-003**	**0.0000**	**31.9126**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3000e-004	7.6800e-003	2.5500e-003	2.0000e-005	4.1000e-004	2.0000e-005	4.3000e-004	1.2000e-004	2.0000e-005	1.4000e-004	0.0000	1.6243	1.6243	3.0000e-005	0.0000	1.6250

Worker	9.3000e-004	5.7000e-004	6.0400e-003	2.0000e-005	1.7100e-003	1.0000e-005	1.7300e-003	4.6000e-004	1.0000e-005	4.7000e-004	0.0000	1.4675	1.4675	4.0000e-005	0.0000	1.4685
Total	**1.1600e-003**	**8.2500e-003**	**8.5900e-003**	**4.0000e-005**	**2.1200e-003**	**3.0000e-005**	**2.1600e-003**	**5.8000e-004**	**3.0000e-005**	**6.1000e-004**	**0.0000**	**3.0917**	**3.0917**	**7.0000e-005**	**0.0000**	**3.0935**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0317	0.2386	0.2257	3.9000e-004		0.0120	0.0120		0.0116	0.0116	0.0000	31.7708	31.7708	5.6700e-003	0.0000	31.9126
Total	**0.0317**	**0.2386**	**0.2257**	**3.9000e-004**		**0.0120**	**0.0120**		**0.0116**	**0.0116**	**0.0000**	**31.7708**	**31.7708**	**5.6700e-003**	**0.0000**	**31.9126**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3000e-004	7.6800e-003	2.5500e-003	2.0000e-005	4.1000e-004	2.0000e-005	4.3000e-004	1.2000e-004	2.0000e-005	1.4000e-004	0.0000	1.6243	1.6243	3.0000e-005	0.0000	1.6250
Worker	9.3000e-004	5.7000e-004	6.0400e-003	2.0000e-005	1.7100e-003	1.0000e-005	1.7300e-003	4.6000e-004	1.0000e-005	4.7000e-004	0.0000	1.4675	1.4675	4.0000e-005	0.0000	1.4685
Total	**1.1600e-003**	**8.2500e-003**	**8.5900e-003**	**4.0000e-005**	**2.1200e-003**	**3.0000e-005**	**2.1600e-003**	**5.8000e-004**	**3.0000e-005**	**6.1000e-004**	**0.0000**	**3.0917**	**3.0917**	**7.0000e-005**	**0.0000**	**3.0935**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.3200e-003	0.0232	0.0266	4.0000e-005		1.2500e-003	1.2500e-003		1.1500e-003	1.1500e-003	0.0000	3.5295	3.5295	1.1200e-003	0.0000	3.5575
Paving	1.1000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.4200e-003**	**0.0232**	**0.0266**	**4.0000e-005**		**1.2500e-003**	**1.2500e-003**		**1.1500e-003**	**1.1500e-003**	**0.0000**	**3.5295**	**3.5295**	**1.1200e-003**	**0.0000**	**3.5575**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.6000e-004	1.6800e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4088	0.4088	1.0000e-005	0.0000	0.4091
Total	**2.6000e-004**	**1.6000e-004**	**1.6800e-003**	**0.0000**	**4.8000e-004**	**0.0000**	**4.8000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4088**	**0.4088**	**1.0000e-005**	**0.0000**	**0.4091**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.3200e-003	0.0232	0.0266	4.0000e-005		1.2500e-003	1.2500e-003		1.1500e-003	1.1500e-003	0.0000	3.5295	3.5295	1.1200e-003	0.0000	3.5575

Paving	1.1000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.4200e-003**	**0.0232**	**0.0266**	**4.0000e-005**		**1.2500e-003**	**1.2500e-003**		**1.1500e-003**	**1.1500e-003**	**0.0000**	**3.5295**	**3.5295**	**1.1200e-003**	**0.0000**	**3.5575**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.6000e-004	1.6800e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4088	0.4088	1.0000e-005	0.0000	0.4091
Total	**2.6000e-004**	**1.6000e-004**	**1.6800e-003**	**0.0000**	**4.8000e-004**	**0.0000**	**4.8000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4088**	**0.4088**	**1.0000e-005**	**0.0000**	**0.4091**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1098					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6000e-004	4.5800e-003	5.4500e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	0.7660	0.7660	5.0000e-005	0.0000	0.7673
Total	**0.1104**	**4.5800e-003**	**5.4500e-003**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**0.7660**	**0.7660**	**5.0000e-005**	**0.0000**	**0.7673**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	2.0000e-005	2.6000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0629	0.0629	0.0000	0.0000	0.0629
Total	**4.0000e-005**	**2.0000e-005**	**2.6000e-004**	**0.0000**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0629**	**0.0629**	**0.0000**	**0.0000**	**0.0629**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1098					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6000e-004	4.5800e-003	5.4500e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	0.7660	0.7660	5.0000e-005	0.0000	0.7673
Total	**0.1104**	**4.5800e-003**	**5.4500e-003**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**0.7660**	**0.7660**	**5.0000e-005**	**0.0000**	**0.7673**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	2.0000e-005	2.6000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0629	0.0629	0.0000	0.0000	0.0629
Total	**4.0000e-005**	**2.0000e-005**	**2.6000e-004**	**0.0000**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0629**	**0.0629**	**0.0000**	**0.0000**	**0.0629**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1709	0.5304	1.7431	4.5900e-003	0.4044	4.7800e-003	0.4091	0.1084	4.4700e-003	0.1129	0.0000	417.3934	417.3934	0.0145	0.0000	417.7554
Unmitigated	0.1709	0.5304	1.7431	4.5900e-003	0.4044	4.7800e-003	0.4091	0.1084	4.4700e-003	0.1129	0.0000	417.3934	417.3934	0.0145	0.0000	417.7554

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Free-Standing Discount Store	577.58	717.17	568.66	1,094,327	1,094,327
Parking Lot	0.00	0.00	0.00		
Total	577.58	717.17	568.66	1,094,327	1,094,327

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Free-Standing Discount Store	14.70	6.60	6.60	12.20	68.80	19.00	66	0	34
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Free-Standing Discount Store	0.529528	0.038650	0.225199	0.133619	0.030041	0.006237	0.016842	0.009530	0.001608	0.001127	0.005339	0.000802	0.001479
Parking Lot	0.529528	0.038650	0.225199	0.133619	0.030041	0.006237	0.016842	0.009530	0.001608	0.001127	0.005339	0.000802	0.001479

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	12.1327	12.1327	1.6800e-003	3.5000e-004	12.2779
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	12.1327	12.1327	1.6800e-003	3.5000e-004	12.2779
NaturalGas Mitigated	3.5000e-004	3.2200e-003	2.7000e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.5013	3.5013	7.0000e-005	6.0000e-005	3.5221
NaturalGas Unmitigated	3.5000e-004	3.2200e-003	2.7000e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.5013	3.5013	7.0000e-005	6.0000e-005	3.5221

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Free-Standing Discount Store	65611	3.5000e-004	3.2200e-003	2.7000e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.5013	3.5013	7.0000e-005	6.0000e-005	3.5221

Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**3.5000e-004**	**3.2200e-003**	**2.7000e-003**	**2.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**3.5013**	**3.5013**	**7.0000e-005**	**6.0000e-005**	**3.5221**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Free-Standing Discount Store	65611	3.5000e-004	3.2200e-003	2.7000e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.5013	3.5013	7.0000e-005	6.0000e-005	3.5221
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**3.5000e-004**	**3.2200e-003**	**2.7000e-003**	**2.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**3.5013**	**3.5013**	**7.0000e-005**	**6.0000e-005**	**3.5221**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Free-Standing Discount Store	123032	11.7193	1.6200e-003	3.3000e-004	11.8596
Parking Lot	4340	0.4134	6.0000e-005	1.0000e-005	0.4184
Total		**12.1327**	**1.6800e-003**	**3.4000e-004**	**12.2779**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Free-Standing Discount Store	123032	11.7193	1.6200e-003	3.3000e-004	11.8596
Parking Lot	4340	0.4134	6.0000e-005	1.0000e-005	0.4184
Total		**12.1327**	**1.6800e-003**	**3.4000e-004**	**12.2779**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0474	0.0000	3.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.2000e-004	7.2000e-004	0.0000	0.0000	7.6000e-004
Unmitigated	0.0474	0.0000	3.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.2000e-004	7.2000e-004	0.0000	0.0000	7.6000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0110					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Consumer Products	0.0363					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.2000e-004	7.2000e-004	0.0000	0.0000	7.6000e-004
Total	**0.0474**	**0.0000**	**3.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.2000e-004**	**7.2000e-004**	**0.0000**	**0.0000**	**7.6000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0110					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0363					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.2000e-004	7.2000e-004	0.0000	0.0000	7.6000e-004
Total	**0.0474**	**0.0000**	**3.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.2000e-004**	**7.2000e-004**	**0.0000**	**0.0000**	**7.6000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.4852	0.1532	5.3000e-004	4.4729
Unmitigated	0.4852	0.1532	5.3000e-004	4.4729

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Free-Standing Discount Store	0.67406 / 0.413134	0.4852	0.1532	5.3000e-004	4.4729
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.4852**	**0.1532**	**5.3000e-004**	**4.4729**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Free-Standing Discount Store	0.67406 / 0.413134	0.4852	0.1532	5.3000e-004	4.4729
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.4852**	**0.1532**	**5.3000e-004**	**4.4729**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	7.9451	0.4695	0.0000	19.6836
Unmitigated	7.9451	0.4695	0.0000	19.6836

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Free-Standing Discount Store	39.14	7.9451	0.4695	0.0000	19.6836
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**7.9451**	**0.4695**	**0.0000**	**19.6836**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Free-Standing Discount Store	39.14	7.9451	0.4695	0.0000	19.6836
Parking Lot	0	0.0000	0.0000	0.0000	0.0000

Total		**7.9451**	**0.4695**	**0.0000**	**19.6836**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Version: CalEEMod.2016.3.2

Date: 1/31/2020 2:27 PM

Dollar General - Cool CA

El Dorado-Mountain County County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	1	No Change	0.00
Cement and Mortar Mixers	Diesel	No Change	0	1	No Change	0.00
Cranes	Diesel	No Change	0	1	No Change	0.00
Forklifts	Diesel	No Change	0	1	No Change	0.00
Graders	Diesel	No Change	0	2	No Change	0.00
Pavers	Diesel	No Change	0	1	No Change	0.00
Rollers	Diesel	No Change	0	1	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	2	No Change	0.00

Tractors/Loaders/Backhoes	Diesel	No Change	0	4	No Change	0.00
Generator Sets	Diesel	No Change	0	1	No Change	0.00
Paving Equipment	Diesel	No Change	0	1	No Change	0.00
Welders	Diesel	No Change	0	3	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	6.60000E-004	4.58000E-003	5.45000E-003	1.00000E-005	2.80000E-004	2.80000E-004	0.00000E+000	7.65980E-001	7.65980E-001	5.00000E-005	0.00000E+000	7.67290E-001
Cement and Mortar Mixers	1.30000E-004	8.30000E-004	6.90000E-004	0.00000E+000	3.00000E-005	3.00000E-005	0.00000E+000	1.03110E-001	1.03110E-001	1.00000E-005	0.00000E+000	1.03380E-001
Cranes	1.83400E-002	2.17310E-001	8.63100E-002	2.40000E-004	8.92000E-003	8.21000E-003	0.00000E+000	2.11002E+001	2.11002E+001	6.82000E-003	0.00000E+000	2.12708E+001
Forklifts	5.80000E-003	5.24500E-002	4.89700E-002	6.00000E-005	3.85000E-003	3.55000E-003	0.00000E+000	5.58988E+000	5.58988E+000	1.81000E-003	0.00000E+000	5.63507E+000
Generator Sets	2.14200E-002	1.87590E-001	2.05290E-001	3.70000E-004	1.03900E-002	1.03900E-002	0.00000E+000	3.13690E+001	3.13690E+001	1.71000E-003	0.00000E+000	3.14119E+001
Graders	2.26000E-003	3.00500E-002	8.62000E-003	3.00000E-005	9.60000E-004	8.80000E-004	0.00000E+000	2.76956E+000	2.76956E+000	9.00000E-004	0.00000E+000	2.79195E+000
Pavers	5.50000E-004	5.84000E-003	6.54000E-003	1.00000E-005	2.80000E-004	2.60000E-004	0.00000E+000	9.28850E-001	9.28850E-001	3.00000E-004	0.00000E+000	9.36360E-001
Paving Equipment	5.80000E-004	5.82000E-003	7.62000E-003	1.00000E-005	2.90000E-004	2.60000E-004	0.00000E+000	1.07353E+000	1.07353E+000	3.50000E-004	0.00000E+000	1.08221E+000
Rollers	5.00000E-004	5.05000E-003	4.94000E-003	1.00000E-005	3.10000E-004	2.80000E-004	0.00000E+000	6.05080E-001	6.05080E-001	2.00000E-004	0.00000E+000	6.09970E-001
Rubber Tired Dozers	4.99000E-003	5.24100E-002	1.91100E-002	4.00000E-005	2.57000E-003	2.36000E-003	0.00000E+000	3.47131E+000	3.47131E+000	1.12000E-003	0.00000E+000	3.49937E+000
Tractors/Loaders/Backhoes	1.01200E-002	1.01880E-001	1.13670E-001	1.60000E-004	6.31000E-003	5.81000E-003	0.00000E+000	1.36446E+001	1.36446E+001	4.41000E-003	0.00000E+000	1.37549E+001
Welders	5.48900E-002	2.58350E-001	2.91680E-001	4.30000E-004	1.38000E-002	1.38000E-002	0.00000E+000	3.13387E+001	3.13387E+001	4.46000E-003	0.00000E+000	3.14502E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	6.60000E-004	4.58000E-003	5.45000E-003	1.00000E-005	2.80000E-004	2.80000E-004	0.00000E+000	7.65980E-001	7.65980E-001	5.00000E-005	0.00000E+000	7.67290E-001
Cement and Mortar Mixers	1.30000E-004	8.30000E-004	6.90000E-004	0.00000E+000	3.00000E-005	3.00000E-005	0.00000E+000	1.03110E-001	1.03110E-001	1.00000E-005	0.00000E+000	1.03380E-001
Cranes	1.83400E-002	2.17310E-001	8.63100E-002	2.40000E-004	8.92000E-003	8.21000E-003	0.00000E+000	2.11001E+001	2.11001E+001	6.82000E-003	0.00000E+000	2.12708E+001
Forklifts	5.80000E-003	5.24500E-002	4.89700E-002	6.00000E-005	3.85000E-003	3.55000E-003	0.00000E+000	5.58987E+000	5.58987E+000	1.81000E-003	0.00000E+000	5.63507E+000
Generator Sets	2.14200E-002	1.87590E-001	2.05290E-001	3.70000E-004	1.03900E-002	1.03900E-002	0.00000E+000	3.13690E+001	3.13690E+001	1.71000E-003	0.00000E+000	3.14118E+001

Graders	2.26000E-003	3.00500E-002	8.62000E-003	3.00000E-005	9.60000E-004	8.80000E-004	0.00000E+000	2.76955E+000	2.76955E+000	9.00000E-004	0.00000E+000	2.79195E+000
Pavers	5.50000E-004	5.84000E-003	6.54000E-003	1.00000E-005	2.80000E-004	2.60000E-004	0.00000E+000	9.28850E-001	9.28850E-001	3.00000E-004	0.00000E+000	9.36360E-001
Paving Equipment	5.80000E-004	5.82000E-003	7.62000E-003	1.00000E-005	2.90000E-004	2.60000E-004	0.00000E+000	1.07353E+000	1.07353E+000	3.50000E-004	0.00000E+000	1.08221E+000
Rollers	5.00000E-004	5.05000E-003	4.94000E-003	1.00000E-005	3.10000E-004	2.80000E-004	0.00000E+000	6.05080E-001	6.05080E-001	2.00000E-004	0.00000E+000	6.09970E-001
Rubber Tired Dozers	4.99000E-003	5.24100E-002	1.91100E-002	4.00000E-005	2.57000E-003	2.36000E-003	0.00000E+000	3.47130E+000	3.47130E+000	1.12000E-003	0.00000E+000	3.49937E+000
Tractors/Loaders/Backhoes	1.01200E-002	1.01880E-001	1.13670E-001	1.60000E-004	6.31000E-003	5.81000E-003	0.00000E+000	1.36445E+001	1.36445E+001	4.41000E-003	0.00000E+000	1.37549E+001
Welders	5.48900E-002	2.58350E-001	2.91680E-001	4.30000E-004	1.38000E-002	1.38000E-002	0.00000E+000	3.13387E+001	3.13387E+001	4.46000E-003	0.00000E+000	3.14502E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cement and Mortar Mixers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cranes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.42179E-006	1.42179E-006	0.00000E+000	0.00000E+000	9.40257E-007
Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.78895E-006	1.78895E-006	0.00000E+000	0.00000E+000	0.00000E+000
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	9.56358E-007	9.56358E-007	0.00000E+000	0.00000E+000	1.27340E-006
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	3.61068E-006	3.61068E-006	0.00000E+000	0.00000E+000	0.00000E+000
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	2.88076E-006	2.88076E-006	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	7.32893E-007	7.32893E-007	0.00000E+000	0.00000E+000	1.45403E-006
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	9.57282E-007	9.57282E-007	0.00000E+000	0.00000E+000	1.27185E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			

No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.01	0.00	0.01	0.00	0.00	0.00
Grading	Fugitive Dust	0.02	0.01	0.02	0.01	0.00	0.00
Grading	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Fugitive Dust	0.01	0.00	0.01	0.00	0.00	0.00
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.11	0.33		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			
No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			

No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	250.00
No	Use Low VOC Paint (Residential Exterior)	250.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	Use Low VOC Paint (Parking)	250.00

No	% Electric Lawnmower	
No	% Electric Leafblower	
No	% Electric Chainsaw	

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy		
No	Use Reclaimed Water		
No	Use Grey Water		
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction		
No	Use Water Efficient Irrigation Systems	6.10	

No	Water Efficient Landscape		

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services	
Percent Reduction in Waste Disposed	

Dollar General Project

Project Construction Energy Demand

Construction Worker Gasoline Demand

Phase	Trips	Vehicle CO_2 (MT)	Kg CO2/Gallon	Gallons
Site Preparation	16	0.09	8.78	9.89
Grading	80	0.43	8.78	49.43
Building Construction	888	4.77	8.78	542.84
Paving	78	0.41	8.78	46.56
Architectural Coating	12	0.06	8.78	7.16
Total				**655.88**

Construction Haul Diesel Demand

Phase	Trips	Vehicle CO_2 (MT)	Kg CO2/Gallon	Gallons
Site Preparation	0	0.00	10.21	0.00
Grading	50	1.94	10.21	189.94
Building Construction	0	0.00	10.21	0.00
Paving	0	0.00	10.21	0.00
Architectural Coating	0	0.00	10.21	0.00
Total				**189.94**

Construction Vendor Diesel Demand

Phase	Trips	Vehicle CO_2 (MT)	Kg CO2/Gallon	Gallons
Site Preparation	0	0.00	10.21	0.00
Grading	0	0.00	10.21	0.00
Building Construction	444	5.18	10.21	506.91
Paving	0	0.00	10.21	0.00
Architectural Coating	0	0.00	10.21	0.00
Total				**506.91**

Construction Equipment Diesel Demand

Phase	Pieces of Equipment	Equipment CO_2 (MT)	Kg CO2/Gallon	Gallons
Site Preparation	3	1.51	10.21	148.16
Grading	3	6.19	10.21	606.74
Building Construction	7	100.76	10.21	9,868.44
Paving	5	3.53	10.21	345.69
Architectural Coating	1	0.77	10.21	75.02
Total				**11,044.05**

Construction Equipment Usage

Phase	Hours of Use
Site Preparation	46
Grading	190
Building Construction	5,550
Paving	210
Architectural Coating	36
Total	**6,032**

Dollar General Project

Project Operational Energy Demand

Mobile Source Gasoline Demand

Scenario	Vehicle MT CO_2	Kg CO2/Gallon	Gallons
Project	392.43	8.78	44,696.00

Mobile Source Diesel Demand

Scenario	Vehicle MT CO_2	Kg CO2/Gallon	Gallons
Project	24.96	10.21	2,444.95

Electricity Demand

Project Facility	kWh/Year
Building and Lighting Electricity Demand	
Discount Store	123,032.00
Parking Lot	4,340.00
Water/Wastewater Electricity Demand	
Discount Store	5,093.31
Total	**132,465.31**

Natural Gas Demand

Scenario	kBTu/Year
Project	65,611.00

Dollar General Project

Dollar General Project

Project Construction Assumptions

PhaseName	OffRoadEquipmentType	OffRoadEquipmentU	UsageHours	Days	Total Hours	Pieces of Equ	Equip Hours
Site Preparation	Graders	1	8	2	16	3	46
Site Preparation	Rubber Tired Dozers	1	7	2	14		
Site Preparation	Tractors/Loaders/Backhoes	1	8	2	16		
Grading	Graders	1	6	10	60	3	190
Grading	Rubber Tired Dozers	1	6	10	60		
Grading	Tractors/Loaders/Backhoes	1	7	10	70		
Building Construction	Cranes	1	6	111	666	7	5550
Building Construction	Forklifts	1	6	111	666		
Building Construction	Generator Sets	1	8	111	888		
Building Construction	Tractors/Loaders/Backhoes	1	6	111	666		
Building Construction	Welders	3	8	111	2664		
Paving	Cement and Mortar Mixers	1	6	6	36	5	210
Paving	Pavers	1	6	6	36		
Paving	Paving Equipment	1	8	6	48		
Paving	Rollers	1	7	6	42		
Paving	Tractors/Loaders/Backhoes	1	8	6	48		
Architectural Coating	Air Compressors	1	6	6	36	1	36
						Total	6,032

PhaseName	PhaseType	PhaseStartDate	PhaseEndDate	NumDaysW	NumDays
Site Preparation	Site Preparation	2020/09/01	2020/09/02	5	2
Grading	Grading	2020/09/03	2020/09/16	5	10
Building Construction	Building Construction	2020/09/17	2021/02/18	5	111
Paving	Paving	2021/02/19	2021/02/26	5	6
Architectural Coating	Architectural Coating	2021/02/27	2021/03/08	5	6

PhaseName	WorkerTripNumber	VendorTripNumber	HaulingTripNumber	Days	Worker Trips	Vendor Tri	Hauling
Site Preparation	8	0	0	2	16	0	0
Grading	8	0	50	10	80	0	50
Building Construction	8	4	0	111	888	444	0
Paving	13	0	0	6	78	0	0
Architectural Coating	2	0	0	6	12	0	0

Dollar General Project
Operational Electricity

Total Electricity - Project	kWh/yr
Discount Store	123,032.00
Parking Lot	4,340.00
Water/Wastewater	5,093.31
Total	**132,465.31**

Electricity Intensity Factors - Water/Wastewater

Process	Units	
Supply	kwh/MG	2,117
Treat	kwh/MG	111
Distribute	kwh/MG	1,272
Wastewater Treatment	kwh/MG	1,911
Total	**kwh/MG**	**5,411**

* Electricity intensity factors from CalEEMod Appendix D for EDCAQMD

Electricity Demand - Water/Wastewater

	Units	Potable Water - Indoor	Potable Water - Outdoor	Total
Electricity Intensity Factor				
Supply	kwh/MG	2,117	2,117	N/A
Treat	kwh/MG	111	111	N/A
Distribute	kwh/MG	1,272	1,272	N/A
Wastewater Treatment	kwh/MG	1,911	-	N/A
Total	**kwh/MG**	**5,411**	**3,500**	N/A
Water Consumption - Project				
Project Water	MG/yr	0.67	0.41	1.09
Total	**MG/yr**	**0.7**	**0.4**	**1.1**
Electricity Usage - Project	**kwh/yr**	**3,647**	**1,446**	**5,093**

Appendix D

Biological Resources Report

Bole & Associates
An Environmental Consulting Firm

February 18, 2020

WoodCrest Companies
Attn: Steve Powell
1410 Main Street, Suite C
Ramona, CA 92065

REVISED BIOLOGICAL ASSESSMENT AND WETLAND DETERMINATION FOR EL DORADO COUNTY APN 071-500-037, LOCATED IN SECTION 18, TOWNSHIP 12 NORTH, RANGE 9 EAST, 1020 NORTHSIDE DRIVE, COOL, EL DORADO COUNTY, CA 95614. MHBA FILE 0515-2019-3598.

INTRODUCTION

During May and June of 2019, a Biological Assessment was conducted on a 1.69-acre parcel of land (APN 071-500-037), located on the U.S. Geological survey (USGS) Auburn 7.5-minute topographic quadrangle Section 18, Township 12 North, Range 9 East, (Enclosure B, Figure 1). Particular attention was focused upon the project's potential impact to federal and state special-status plants and wildlife species and their habitats. Historically, the project area has been undeveloped land.

A records search was completed prior to field surveys of the United States Fish & Wildlife Service's *Federal Endangered and Threatened Species List* (IPaC, NEPA) for the Auburn7 ½ minute quadrangle (Enclosure D). The USFWS document lists plants and wildlife that have Federal special species status. The IPaC data base lists revealed several special status wildlife species with a potential to occur onsite. Additionally, the a nine quadrangle search of the California Department of Fish & Wildlife, California Natural Diversity Database (CNDDB) was reviewed including the United States Geological Survey (USGS) "Auburn, Lake Combie, Pilot Hill, Wolf, Coloma, Gold Hill, Rocklin, Colfax and Greedwood 7.5 minute quadrangles. Based on the results of the species lists, appropriate biological and botanical surveys were conducted. These species and their potential to use onsite habitats are future discussed in Table 1.

Field studies were conducted on foot making observations and noting habitat conditions, surrounding land uses, and plant and wildlife species. In accordance with guidance set forth in the United States Army Corps of Engineer's *1987 Wetlands Delineation Manual* a wetland determination was conducted. Field surveys were conducted to determine the presence of sensitive species, and/or suitable habitat for sensitive species (e.g. elderberry shrubs, riparian habitats, etc.). These surveys also included ocular reconnaissance of the entire study area and buffer zones for nesting (or burrowing) raptors and owls (*Strix occidentalis caurina).*

EXISTING SETTING

Habitat Description

The subject property is located in the foothills of the Sierra Nevada Mountain range. The site consists of gently rolling topography, with a central portion that is predominantly level with gravel surfacing. The eastern portion of the site slopes up to an elevation of approximately 1,550 feet; the central portion is at approximately 1,530 feet. The property slopes sharply towards the west in the western portion of the site to an elevation of approximately 1,520 feet. The vegetation series, according to Sawyer and Keeler-Wolf (1995), is California Annual and Non-Native Grassland Series; however, the site has been highly disturbed and is located along a major traffic route along the main commercial corridor of Cool. As such the site does not function as a pristine oak woodland, rather, it is more accurate to describe the site as a disturbed non-native grassland featuring several oak and pine trees. A number of large and small diameter blue oak, interior live oak, and gray pine were located throughout the site, primarily in the eastern portion of the site. The trees with diameters greater than 6 inches at breast height (DBH) are presented in the table below:

Tree Tag Number	Species	Diameter at Breast Height (DBH) (inches)
1	*Quercus douglasii*	19
2	*Quercus douglasii*	19
3	*Quercus wislizeni*	Multiple trunks: 19, 11, 15, 8, 5
4	*Pinus sabiniana*	15.5
5	*Quercus douglasii*	13
6	*Quercus douglasii*	19.5
7	*Quercus wislizeni*	Multiple trunks: 18, 15, 3.5
8	*Pinus sabiniana*	9.5
9	*Quercus douglasii*	Multiple trunks: 9.5, 10
10	*Quercus douglasii*	15

The approximate locations of these trees are presented in Figure 3 in Enclosure B. There are no wetlands or riparian habitats within the footprint of the proposed development.

California Annual Grassland Series

Most of the dominant grasses are introduced, annual, non-native vegetation. Due to the phenology of these grasses they tend to dominate the landscape. Besides the brome, barley and ryegrass, other grasses found included barbed goatgrass (*Aegilops triuncialis*). Non-native forbs found at the site were yellow starthistle (*Centaurea solstitialis*), filaree (*Erodium* spp.), and vetch (*Vicia* spp.).

Wildlife Communities:

Open, ruderal grassland habitats generally provide marginal breeding, cover, and foraging habitat for wildlife species. A limited variety of bird, reptile and mammal species were observed during the recent surveys. Species observed in these habitats include American crow (*Corvus brachyrhynchos*), American robin (*Turdus migratorius*), western scrub jay (*Aphelocoma*

coerulescens), turkey vulture (*Cathartes aura*), western meadowlark (*Sturnella neglecta*), black-tailed hare (*Lepus californicus*), coyote (*Canis latrans*), Botta's pocket gopher (*Thomomys bottae*) and the western fence lizard (*Sceloporus occidentalis*

Special Status Species:

The following discussion describes the plant and animal species that have been afforded special recognition by federal, state, or local resource agencies or organizations. Listed and special-status species are of relatively limited distribution and may require specialized habitat conditions. Listed and special-status species are defined as one of the following:

- Listed or proposed for listing under the state or federal Endangered Species Acts.
- Protected under other regulations (e.g., Migratory Bird Treaty Act).
- California Department of Fish and Game (CDFG) Species of Special Concern.
- Receive consideration during environmental review under CEQA.

Special-status species were considered for this analysis based on field survey results, a review of the Federal Endangered and Threatened Species list for El Dorado County, California Natural Diversity Database (Auburn, Lake Combie, Pilot Hill, Wolf, Coloma, Gold Hill, Rocklin, Colfax and Greedwood 7.5 minute Quadrangles), CNPS literature, and database information provided by the U. S. Fish and Wildlife Service (IPaC Federal listed species data base for Auburn 7 ½ Minute Quad). Over ten hours of onsite surveys did not reveal the presence of special status wildlife or plant species or their specific micro-habitat.

Sensitive Habitats:

Sensitive habitats include those that are of special concern to resource agencies and those that are protected under NEPA, Section 1600 of the California Fish and Game Code, or Section 404 of the Clean Water Act. A biologist from Marcus H. Bole & Associates conducted over ten hours of field survey of the study area during May and June of 2019. The project area was systematically surveyed to ensure total search coverage, with special attention given to identifying those portions of the study area with the potential for supporting special-status species and sensitive habitats. No sensitive habitats were found within the footprint of the proposed development.

Determination of Waters of the United States

The intent of this determination is to identify wetlands and "other waters of the United States" that are present within the Study Area that could fall under the regulatory jurisdiction of the U. S. Army Corps of Engineers (Corps) pursuant to Section 404 of the Clean Water Act. The *1987 Corps of Engineers Wetlands Delineation Manual* identifies several methodologies and combinations of methodologies that can be utilized in making jurisdictional determinations. Marcus H. Bole & Associates has employed the Routine On-Site Determination methodology for this study (as supplemented by the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region,* dated December 2006). The Routine On-Site

Determination method uses a three-parameter approach (vegetation, soils and hydrology) to identify and delineate the boundaries of jurisdictional wetlands. To be considered a wetland, all three positive wetland parameters must be present. These parameters include (1) a dominance of wetland vegetation, (2) a presence of hydric soils, and (3) hydrologic conditions that result in periods of inundation or saturation on the surface from flooding or ponding. Further description of these parameters is provided below:

1) Vegetation. Wetland vegetation includes those plants that possess physiological traits that allow them to grow and persist in soils subject to inundation and anaerobic soil conditions. Plant species are classified according to their probability of being associated with wetlands. Obligate (OBL) wetland plant species almost always occur in wetlands (more than 99 percent of the time), facultative wetland (FACW) plant species occur in wetlands most of the time (67 to 99 percent), and facultative (FAC) plant species have about an equal chance (33 to 66 percent) of occurring in wetlands as in uplands. For this study, vegetation was considered to meet the vegetation criteria if more than 50% of the vegetative cover was FAC or wetter. No wetland vegetation was noted on the subject property. No other wetland habitats were found near or within the project site during our onsite evaluations. There was no sign of vernal pools or vernal swales on the property.

2) Hydric Soils. Hydric soils are saturated, flooded, or ponded in the upper stratum long enough during the growing season to develop anaerobic conditions and favor the growth of wetland plants. Hydric soils include gleyed soils (soils with gray colors), or usually display indicators such as low chroma values, redoximorphic features, iron, or manganese concretions, or a combination of these indicators. Low chroma values are generally defined as having a value of 2 or less using the Munsell Soil Notations (Munsell, 1994). For this study a soil was considered to meet the hydric soil criteria for color if it had a chroma value of one or a chroma of two with redoximorphic features, or if the soil exhibited iron or manganese concretions. Redoximorphic features (commonly referred to as mottles) are areas in the soils that have brighter (higher chroma) or grayer (lower chroma) colors than the soil matrix. Redoximorphic features are the result of the oxidation and reduction process that occurs under anaerobic conditions. Iron and manganese concretions form during the oxidation-reduction process, when iron and manganese in suspension are sometimes segregated as oxides into concretions or soft masses. These accumulations are usually black or dark brown. Concretions 2 mm in diameter occurring within 7.5 cm of the surface are evidence that the soil is saturated for long periods near the surface. Onsite soils were identified as Auburn silt loam, 2 to 30 percent slopes; and Delpiedra very rock loam, 3 to 50 percent slopes. The soils are predominately formed in material weathered from amphibolite schist, greenstone schist, and serpentine. These are well drained soils; surface soils are moderately permeable. Onsite soils did not exhibit hydric indicators (see Enclosure C).

3) Hydrology. Wetlands by definition are seasonally inundated or saturated at or near the surface. In order for an area to have wetland hydrology, it has to be inundated or saturated for 5% of the growing season (approximately 12 days) (USDA, 1967). Indicators include visual soil saturation, flooding, watermarks, drainage patterns, encrusted sediment and plant deposits, cryptogrammic lichens, and algal mats. No hydrologic indicators were noted onsite.

Wetland Determination Results

Using the methodologies described in the *1987 Wetland Delineation Manual*, Marcus H. Bole & Associates found no federal jurisdictional wetland habitats within the boundaries of the proposed site development.

POTENTIAL PROJECT IMPACTS

Site development as proposed will not result in impacts to listed federal or state plant or wildlife species. Impacts to common vegetation and wildlife habitats are as follows:

Common Vegetation and Wildlife Habitats:

Project implementation may result in unanticipated impacts to wildlife habitat.

Project implementation will result in alterations (removal) of ruderal grasslands and trees, both pine and oak. These habitats are regionally widespread, and the common wildlife species utilizing these habitats would likely be displaced to adjacent offsite habitats and therefore not adversely affected by the project. The subject property, while containing blue oak and gray pines, is located along a disturbed, commercial corridor of the City of Cool. The subject property has been graded and disturbed in portions of the site. The following trees, as identified by tag number, are currently planned for removal as part of the project:

Tag Number	Species	Diameter at breast height (in.); total	Heritage Tree? (Y/N)
3	*Quercus wislizeni*	Multiple trunks: 19, 11, 15, 8, 5; total = 58	YES
4	*Pinus sabiniana*	15.5	N/A
5	*Quercus douglasii*	13	N
7	*Quercus wislizeni*	Multiple trunks: 18, 15, 3.5; total = 36.5	YES
8	*Pinus sabiniana*	9.5	N/A
9	*Quercus douglasii*	Multiple trunks: 9.5, 10; total = 19.5	NO
10	*Quercus douglasii*	15	NO

A map showing the impacted trees is presented in Enclosure B. Impacts to the pine trees (tags 4 & 8) will not require any mitigation measures. Impacts to the oak trees will be subject to mitigation measures as laid out in the *El Dorado County Oak Resources Management Plan* (included in Enclosure E). The ORMP describes the calculation for in-lieu fees associated with the removal of oak trees. For non-Heritage Trees, the fee has been calculated as $153.00 per inch; for Heritage Trees, the fee has been calculated at $459.00 per inch. Based on these fees, the mitigation for the removal of the five (5) oak trees is presented in the table below:

Tag Number	Total dbh	Heritage Tree?	Impact fee
3	58	Yes	$26,622.00
5	13	No	$1,989.00
7	36.5	Yes	$16,753.50
9	19.5	No	$3,100.50
10	15	No	$2,385.00
		TOTAL:	$50,850.00

According to the ORMP, an *Oak Resources Technical Report* will be prepared by a qualified arborist prior to the implementation of the project. If removal of trees greater than 6 inches diameter at breast height (DBH) is anticipated, the removal must be done in accordance with all applicable local guidelines issued by El Dorado County. The development of this site will not interfere with the movement of any native resident or migratory fish or wildlife species, or result in impacts to established native resident or migratory wildlife corridors. The project will not affect the use of native wildlife nursery sites.

Special-Status Species:

Special-status species were considered for this analysis based on field survey results, a review of the Federal Endangered and Threatened Species list for El Dorado County, California Natural Diversity Database (Auburn, Lake Combie, Pilot Hill, Wolf, Coloma, Gold Hill, Rocklin, Colfax and Greedwood 7.5 minute Quadrangles), CNPS literature, and database information provided by the U. S. Fish and Wildlife Service (IPaC Federal listed species data base for Auburn 7 ½ Minute Quad).

TABLE 1
LISTED AND SPECIAL-STATUS SPECIES EVALUATED FOR POTENTIALLY OCCURRING WITHIN OR NEAR THE SITE

Species	Federal (USFWS)	State (CDFG) & (CNPS)	Habitat	Potential for Occurrence
Invertebrates				
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	T	None G3T2 S2	Prefers to lay eggs in elderberries (*Sambucus mexicana*) 2-8 inches in diameter.	**None:** botanical surveys did not reveal the presence of blue elderberry shrubs within the property or within 1,000 feet of the boundaries of the subject property.
Tight coin (=Yates snail) (*Ammonitella yatesii*)	None	None G2 S2	Found in humus limestone caves and outcroppings. Pioneer Cave.	**None:** subject property has no limestone caves or outcroppings required by the species.
Alabaster Cave harvestman (*Banksula californica)*	None	None GH SH	Known only from the type locality, Alabaster Cave, El Dorado County.	**None:** subject property has no cave habitat.
Galile's cave harvestman (*Banksula galilei*)	None	None G1 S1	Known only from the type locality, lime rock caves, El Dorado County.	**None:** there is no suitable habitat within the project site for this species. None observed during onsite surveys.
Obscure bumble bee (*Bombus caliginosus)*	None	None G4? S1S2	Food plant genera includes *baccharis, cirsium, lupines, lotus,*	**Marginal:** subject property has a sparse amount of flowers required for forage, and no nest sites or overwintering sites to sustain

			grindelia and phacelia.	this species. None observed during onsite surveys.
Morrison bumble bee (*Bombus morrisoni*)	None	None G4G5 S1S2	Food plant genera include *cirsium, cleome, helianthus, lupinus, chrysothamus and melilotus.*	**Marginal:** subject property has a sparse amount of flowers required for forage, and no nest sites or overwintering sites to sustain this species. Not within the known range of this species. None observed during onsite surveys.
Western bumble bee *(Bombus occidentalis)*	None	CE		
Cosumnes stripetail (*Cosumnoperia hypocrena*)	None	None G2 S2	Found in intermittent streams on western slope of central Sierra Nevada foothills in American and Cosumnes River basins.	**Marginal:** subject property has a sparse amount of flowers required for forage, and no nest sites or overwintering sites to sustain this species. None observed during onsite surveys.
Vernal pool andrenid bee (*Andrena subapasta*)	None	None G1G2 S1S2	Collects pollen primarily from *arenaria californica* but also *orthocarpus erianthus & lasthenia spp*. Nests in uplands near vernal pools.	**None:** subject property lacks vernal pool habitat. The species' host plants were not found on-site.
Vernal pool fairy shrimp *(Branchinecta lynchi)*	T	None G3 S2S3	Endemic to the grasslands of the Central Valley, Central Coast Mountains and South Coast Mountains, ins astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	**None:** subject property has no vernal pool habitat.
California linderiella (*Linderiella occientalis*)	None	None IUCN_NT G2G3 S2S3	Seasonal pools in unplowed grassland with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools has very low alkalinity, and total dissolved solids.	**None:** subject property has no vernal pool habitat.
Western pearlshell (*Margaritifera falcata)*	None	None G4G5 S1S2	Aquatic. Prefers lower velocity waters. AQUATIC.	**None:** subject property has no aquatic habitat.
Amphibians and Reptiles				
California red-legged frog *(Rana draytonii)*	T	CDFG SSC G2G3 S2S3	Lowlands & foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.	**None:** subject property lacks suitable water and/or riparian habitat.
Foothill yellow-legged frog (*Rana boylii)*	None	Candidate T G3 S3	Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches.	**None:** subject property lacks suitable water and/or riparian habitat.
Western pond turtle *(Emys marmorata)*	None	SSC G3G4 S3	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with	**None:** subject property lacks suitable water and/or riparian habitat.

			aquatic vegetation below 6000 ft elevation.	
Coast horned lizard (*Ohrynosoma Blainvillii*)	None	SSC G3G4 S3S4	Frequents a wide varied of habitats, most common in lowlands along sandy washes with scattered low bushes.	**None:** there are no suitable soils (sandy) to support this species. None observed during onsite surveys.
Fishes				
Delta smelt (*Hypomesus transpacificus)*	T	E G1 S1	Sacramento-San Joaquin delta.	**None:** subject property does not have streams or other suitable water resources. Subject property is outside the range of this species.
Steelhead - Central *Valley DPS (Oncorhynchus mykiss Irideus pop. 11)*	T	None G5T23Q S2S3	Population is in the Sacramento and San Joaquin Rivers and their tributaries.	**None:** subject property does not have streams or other suitable water resources. Subject property is outside the range of this species.
Flowering Plants				
Hartweg's golden sunburst (*Pseudobahia bahiifolia)*	E	STATE E CNPS 1B.1	Valley and Foothill grassland, cismontane woodland. Requires clay soils, often acidic. Predominantly on the northern slopes of knolls, but also along shady creeks or near vernal pools.	**Marginal:** subject property has been graded and disturbed in numerous areas with very little habitat available to support this species. None were observed during the onsite survey.
Jepson's onion (*Allium jepsonii)*	None	None CNPS 1B.2	Chaparral, cismontane woodland, lower montane coniferous forest.	**Marginal:** subject property has been graded and disturbed in numerous areas with very little habitat available to support this species. None were observed during the onsite survey.
Big-scale balsamroot (*Balsamorhiza macrolepis)*	None	None CNPS 1B.2	Chaparral, valley and foothill grassland, cismontane woodland, sometimes on serpentine.	**Marginal:** subject property has been graded and disturbed in numerous areas with very little habitat available to support this species. None were observed during the onsite survey.
Stebbins' morning-glory (*Calystegia stebbinsii)*	E	E CNPS 1B.1	Chaparral, cismontane woodland, on red clay soils of the pine hill formation; gabbro or serpentine: open areas.	**Marginal:** subject property has been graded and disturbed in numerous areas with very little habitat available to support this species. None were observed during the onsite survey.
Chaparral sedge *(Carex xerophila)*	None	None CNPS 1B.2	Chaparral, valley and foothill grassland, cismontane woodland, sometimes on serpentine.	**Marginal:** subject property has been graded and disturbed in numerous areas with very little habitat available to support this species. None were observed during the onsite survey.
Pine Hill ceanothus *(Ceanothus roderickii*)	E	Rare CNPS 1B.1	Chaparral, cismontane woodland. Gabbroic or serpentine soils; often in "historically disturbed" areas with an ensemble of other rare plants.	**Marginal:** subject property has been graded and disturbed in numerous areas with very little habitat available to support this species. None were observed during the onsite survey.
Red Hills soaproot (*Chlorogalum grandiflorum*)	None	None CNPS 1B.2	Cismontane woodland chaparral, lower montane coniferous forest. Occurs frequently on serpentine or gabbro, but also on non-	**Marginal:** subject property has been graded and disturbed in numerous areas with very little habitat available to support this species. None were observed during the onsite survey.

			ultramafic substrates; often on "historically disturbed" areas.	
Brandegee's clarkia (*Clarkia biloba ssp. brandegeeae*)	None	None CNPS 4.2	Chaparral, cismontane woodland, lower montane coniferous forest, often in road cuts.	**Marginal:** subject property has been graded and disturbed in numerous areas with very little habitat available to support this species. None were observed during the onsite survey.
Bisbee Peak rush-rose (*Crocanthemum suffrutescens*)	None	None CNPS 3.2	Often on serpentine, gabbroic, or Ione formation soils; in openings in chaparral.	**Marginal:** subject property has neither gabbro nor Ione soils required for this species. None were observed during the onsite survey.
Butte County fritillary (*Fritillaria eastwoodiae)*	None	None CNPS 3.2	Chaparral, cismontane woodland, lower montane coniferous forest, usually on dry slopes but also found in wet places; soils can be serpentine, red clay or sandy soils.	**Marginal:** subject property has been graded and disturbed in numerous areas with very little habitat available to support this species. None were observed during the onsite survey.
El Dorado bedstraw *(Galium californicum ssp. sierrae)*	E	Rare CNPS 1B.2	Cismontane woodland chaparral, lower montane coniferous forest, in pine-oak woodland or chaparral. Restricted to gabbroic or serpentine soils	**None:** subject property lacks gabbro soils required for this species. None were observed during the onsite survey
Boggs Lake hedge-hyssop (*Gratiola heterosepaia*)	None	E CNPS 1B.2	Marshes and swamps (freshwater), vernal pools, clay soils; usually in vernal pools, sometimes on lake margins.	**None:** there are no marshes, swamps or vernal pools on the subject property.
Dubious pea (*Lathyrus sulphureus var. argillaceus*)	None	None CNPS 4.3	Cismontane woodland, lower montane coniferous forest, upper montane coniferous forest.	**Marginal:** subject property has been graded and disturbed in numerous areas with very little habitat available to support this species. None were observed during the onsite survey.
Layne's ragwort (butterewort) (*Packera layneae*)	T	Rare CNPS 1B.2	Chaparral cismontane woodland, ultramafic soil (serpentine or gabbro); occasionally along streams.	**Marginal:** subject property has been graded and disturbed in numerous areas with very little habitat available to support this species. None were observed during the onsite survey.
Sierra blue grass (*Poa sierrae*)	None	None CNPS 1B.3	Lower montane coniferous forest. Shady, moist, rocky slopes, often in canyons.	**Marginal:** subject property has been graded and disturbed in numerous areas with very little habitat available to support this species. None were observed during the onsite survey.
Oval-leaved viburnum (*Viburnum ellipticum*)	None	None CNPS 2.3	Chaparral, cismontane woodland, lower montane coniferous forest.	**Marginal:** subject property has been graded and disturbed in numerous areas with very little habitat available to support this species. None were observed during the onsite survey.
El Dorado County mule ears (*Wyethia reticulata*)	None	None CNPS 1B.2	Chaparral, cismontane woodland, lower montane coniferous forest; stony red clay and gabbroic soils; often in openings in gabbro chaparral.	**Marginal:** subject property has been graded and disturbed in numerous areas with very little habitat available to support this species. None were observed during the onsite survey.
Mammals				
Pallid bat (*Antrozous pallidus*)	None	SSC G5 S3	Desserts, grasslands, shrublands, woodlands and forests. Most	**Marginal:** there is no suitable roosting habitat within the project site for this species. None were observed during the

			common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites	habitat survey.
Townsend's big-eared bat (*Corynorhinus townsendii*)	None	CT SSC G3G4 S2	Throughout California in a wide variety of habitats. Requires caves or mines for roosting, Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	**None:** there are no caves or other suitable roosting habitat within the project site for this species. None were observed during the habitat survey.
North American porcupine (*Emys marmorata*)	None	None IUCN_LC G5 S3	Forested habitats in the Sierra Nevada, Cascade, and Coast Ranges, with scattered observations from forested areas in the transverse ranges.	**None:** there is no suitable forested habitat within the project site for this species. None were observed during the habitat survey.
Fisher - West Coast DPS (*Pekania pennanti*)	None	T SSC G5T2T3Q S2S3	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. Uses cavities, snags, logs and rocky areas for cover and denning. Needs large areas of mature, dense forest.	**None:** subject property lacks suitable conifer and deciduous-riparian habitat. None were observed during the habitat survey.
Birds				
Tricolored blackbird (Agelaius tricolor)	None	T SSC G2G3 S2	Highly colonial species, most numerous in Central Valley. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	**None:** subject property lacks suitable open water habitat. No suitable open water habitat with one mile of property. Subject property has no dense hydrophytic plant thickets. None were observed during the habitat survey.
White-tailed kite *(Ellanus leucurus)*	None	None CDFW_FP G5 S3S4	Rolling foothills and valley margins with scattered oaks & river bottomlands or marshes next to deciduous woodland. Rarely found away from agricultural lands. Meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	**Marginal:** there is no suitable habitat within or near the property. Subject property is out of known range of the species. Onsite oak trees do not provide dense-topped trees for nesting or perching. None were observed during the habitat survey.
American peregrine falcon (*Falco peregrinus anatum*)	Delisted	Delisted CDFW_FP USFWS_ BCC	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also human-made structures. Nest	**Marginal:** subject property is not near lakes or other suitable habitat. None were observed during the habitat survey.

		G4 S3 S4	consists of a scrape or a depression or ledge in an open site.	
Bald eagle (*Haliaeetus leucocephalus)*	Delisted	E CDFW_FP G5 S2	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nest in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	**None:** subject property is too far from suitable river or lake foraging habitat. None were observed during the habitat survey.
California black rail (*Laterallus jamaicensis coturniculus)*	None	T USFWS_ BCC G4T1 S1	Inhabits freshwater marshes, wet meadows and shallow margins of salt water bordering large bays. Needs water depth of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	**None:** subject property is has no suitable wetland habitat and is out of the known range for this species. None were observed during the habitat survey.
Osprey (*Pandion hallaetus*)	None	None CDF_S CDFW_ WL IUCN_ LC	Ocean shore, bays, freshwater lakes, and larger streams. Large nests built in tree-tops within 15 miles of a good fish-producing body of water.	**None:** subject property has no large, fish bearing waters. None were observed during the habitat survey.
Purple martin (*Progne subis*)	None	None SSC G5 S3	Inhabits woodlands, low elevation coniferous forest of Douglas-fir, ponderosa pine, and riparian habitats. Nests in old woodpecker cavities mostly; also in human-made structures. Nest often located in tall, isolated tree/snag.	**Marginal:** subject property lacks suitable riparian and nesting habitat. None were observed during the habitat survey.
Bank swallow *(Riparia riparia)*	None	T G5 S2	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	**None:** subject property lacks suitable bank or cliff nesting habitat, and is out of the known range of this species. None were observed during the habitat survey.

Notations, Symbols and Abbreviations

Species printed in bold type are listed under Federal and/or California Endangered Species Acts.
Listing Status = Federal and California Endangered Species Acts listing status:
E = Endangered R = Rare T = Threatened
D = De-listed C = Candidate for listing
Conservation Ranks are shorthand formulas that provide information on the rarity of species in their global range (G1 to G5) and within the state (S1 to S5). Status of subspecies is also ranked (T1 to T5).
G1 or S1 or T1 = Extremely endangered: <6 viable occurrences (EOs) or <1000 individuals or <2000 acres of occupied habitat
G2 or S2 or T2 = Endangered: 6-20 EOs or 1000-3000 individuals or 2000-10,000 acres
G3 or S3 or T3 = Restricted range, rare: 21-80 EOs or 3000-10,000 individuals or 10,000-50,000 acres
G4 or S4 or T4 = Apparently secure: factors exist to cause some concern, such as narrowing of habitat

G5 or S5 or T5 = Demonstrably secure: commonly found throughout its historic range.
Other Notations
G1G2 = proper rank is most likely within this range of ranks
G2? = proper rank is probably G2
Q = there is some taxonomic question about the species
H = Historic community, presumed eliminated; possibly extinct
NR = Not ranked
N = Non-breeder

Abbreviations
BCC = U.S. Fish & Wildlife Service Birds of Conservation Concern
CC = Species of conservation concern to the scientific community; no state or federal protected status
CDFW = California Department of Fish and Wildlife
CITGW = CDF California Interagency Wildlife Task Group
CNPS = California Native Plant Society
CNPS:1B = CNPS list of rare, threatened or endangered plants in California and elsewhere
CNPS:2 = CNPS list of rare, threatened or endangered plants in California, but more common elsewhere
CNPS:3 = CNPS review list of plants with limited distribution information or problematic taxonomy
.1 = Seriously endangered in California (over 80% of occurrences threatened/ high degree of immediate threat
.2 = Fairly endangered in California (20-80% of occurrences threatened)
.3 = Not very endangered in California (<20% of occurrences threatened or no threats known)
SSC = CDFW Species of Special Concern
FP = Fully Protected Species
HCPB = CDF Habitat Conservation Planning Branch
IUCN = World Conservation Union
VU = World Conservation Union list of vulnerable species
LC = World Conservation Union list of species of least concern
USBC = United States Bird Conservancy
Watch list = USBC list of threatened and declining species
USFWS = United States Fish and Wildlife Service

Other Raptors and Migratory Birds:

Raptor species, including the red-tailed hawk and barn owl forage within the ruderal non-native grasslands (onsite). Native and non-native trees within the site are too small to provide nesting habitat for these species, and no nests have been observed to date.

Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*):

The valley elderberry longhorn beetle (VELB) is a federal-listed threatened species. This species inhabits elderberry *(Sambucus sp.*) shrubs and trees associated with riparian habitats throughout the Central Valley and foothill regions of California. Botanical evaluations did not reveal the presence of elderberry shrub within the boundaries of the subject property.

Central Valley Vernal Pools:

Central Valley vernal pools provide habitat for several species of fairy shrimp (federal-listed threatened and endangered) as well as sensitive plant species native to California.
The California Department of Fish and Game, Natural Diversity Data Base does not identify suitable habitat for vernal pools or swales within 25 miles of the subject property, and no evidence of onsite vernal pooling was revealed during onsite surveys.

FINDINGS AND RECOMMENDATIONS

Findings:

Known potential biological constraints for the project site include:

1) No potential biological constraints were identified for this site. The site does not support sensitive habitats associated with special status plant or wildlife species. There are no wetlands or riparian habitats within the proposed footprint of the development.

Recommendations:

1) Construction of the project may impact nesting birds. Section 3503 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by FGC or any regulation made pursuant thereto. To avoid impacts to nesting birds the forthcoming CEQA document should include the following measure (or a similar avoidance measure):

If project-related activities are scheduled during the nesting season (typically February 1 to August 31), a focused survey for nests shall be conducted by a qualified biologist within three (3) days prior to the beginning of project-related activities. The qualified biologist shall survey the area within a minimum 500-foot radius around the project area. If an active nest is found, a non-disturbance buffer shall be established around the nest. The width of the buffer shall be determined by the qualified biologist based on the species of bird, its general tolerance of disturbance, and the type of activity proposed. If a lapse in project-related work of seven (7) days or longer occurs, another focused survey shall be conducted

Implementation of the above mitigation measure would ensure the reduction of impacts to a less than significant level.

2) Impacts to oak trees greater than 6 inches dbh will require mitigation measures in accordance with the El Dorado County Oak Resources Management Plan (ORMP). Due to the limited size of the project area, the use of in-lieu fees will be the preferred mitigation measure. An Oak Resources Technical Report will be prepared by a qualified arborist prior to the implementation of the project.
Implementation of the above mitigation measure would ensure the reduction of impacts to a less than significant level.

This concludes our biological evaluation of the 1.69-acre Assessor Parcel Number 071-500-037, located on the U.S. Geological survey (USGS) Auburn 7.5-minute topographic quadrangle (Section 18, Township 12 North, Range 9 East). The property is further defined as being located at 1020 Northside Drive, Cool, California.

If you have any questions concerning our findings please feel free to contact me directly at: Bole & Associates, Attn: David Bole, 6898 Penny Way, Browns Valley, CA 95918, phone 530-415-6623, fax 530-633-0119, email: davidhbole@yahoo.com. For a complete copy of the Statement

of Qualifications of the staff members conducting this evaluation please visit our website at: mhbole.com.

Respectfully Submitted:

David H. Bole, Principal
Environmental Scientist
Senior Wildlife Biologist

REFERENCES

Barbour, Michael G., and Jack Major. 1995. *Terrestrial Vegetation of California.* California Native Plant Society, University of California, Davis. 1030 pp.

CDFG. 2019. *Rarefind Natural Diversity Data Base*. California Department of Fish and Game, Natural Heritage Division. June 2019.

CDFG. 2000. *Recommended Timing and Methodology For Swainson's Hawk Nesting Surveys in California's Central Valley*. Swainson's Hawk Technical Advisory Committee. May 31, 2000.

CDFG. *Staff Report regarding Mitigation for Impacts to Swainson's Hawks (Buteo Swainsoni) in the Central Valley of California.* 1994.

Environmental Laboratory. 1987. *Corps of Engineers Wetland Delineation Manual,* Technical Report Y-87-1, US Army Engineer Waterways Experiment Station, Vicksburg, Miss.

Hickman, James C. 1993. *The Jepson Manual, Higher Plants of California*, University of California Press. Berkeley, California. 1300 pp.

Holland, Robert F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California.* State of California, The Resources Agency, Department of Fish and Game, Sacramento, California.

Kartesz, J. T. *A Synonymized Checklist of the Vascular Flora of the United States, Canada and Greenland,* University of North Carolina Press, 1994.

Munz, P. A. and D. D. Keck. 1959. *A California Flora*. University of California Press, Berkeley, CA. 1681 pp. plus supplement.

Natural Diversity Data Base, Special Plants List, Natural Heritage Division, California Department of Fish and Game, February, 1994. Records search, RAREFIND, June 2019, Auburn and surrounding quads as requested.

Ornduff, Robert. 1974. *An Introduction of California Plant Life.* University of California Press, Berkeley, CA. 152 pp.

Reed, P. B., Jr. 1988. *National List of Plant Species That Occur in Wetlands: California (Region O).* U. S. Fish Wildlife Service Biol. Rep. 88 (26.10). 135 pp.

Remsen, J.V. 1978. *Bird species of special concern in California, an annotated list of declining or vulnerable bird species*. California Department of Fish and Game, Nongame Wildlife Investigation Project PR W-54-R-9, Report No. 78-1 (June 1078). 52 pp.

Sawyer, John O., and Todd Keeler-Wolf. 1995 A *Manual of California Vegetation*, California Native Plant Society, Sacramento, California. 470 pp.

Skinner, Mark W., and Bruce M. Pavlik. 1994. *California Native Plant Society's INVENTORY of Rare and Endangered Vascular Plants of California*, February 1994 / Special Publication No. 1 / Fifth Edition, California Native Plant Society, Sacramento, California. 338 pp.

Williams, D. F. 1986. *Mammalian Species of Special Concern in California.* Wildlife Management Division Administrative Report 86-1. State of California, The Resources Agency, Department of Fish and Game.

Zarn, M. 1974. *Burrowing Owl*. U. S. Department of Interior, Bureau of Land Management. Technical Note T-N 250. Denver, Colorado. 25pp.

LIST OF ENCLOSURES

ENCLOSURE A: SITE PHOTOS

ENCLOSURE B: SITE MAPS AND AERIAL PHOTOS

ENCLOSURE C: SOIL INFORMATION

ENCLOSURE D: FEDERAL SPECIES LISTS AND DATABASES

ENCLOSURE D: EL DORADO COUNTY OAK RESOURCES MANAGEMENT PLAN

ENCLOSURE A: SITE PHOTOS

ENCLOSURE B: SITE MAPS AND AERIAL PHOTOS

ENCLOSURE C: SOIL DATA

ENCLOSURE D: USFWS SPECIAL STATUS SPECIES LIST AND CDFG CNDDB SPECIES TABLE

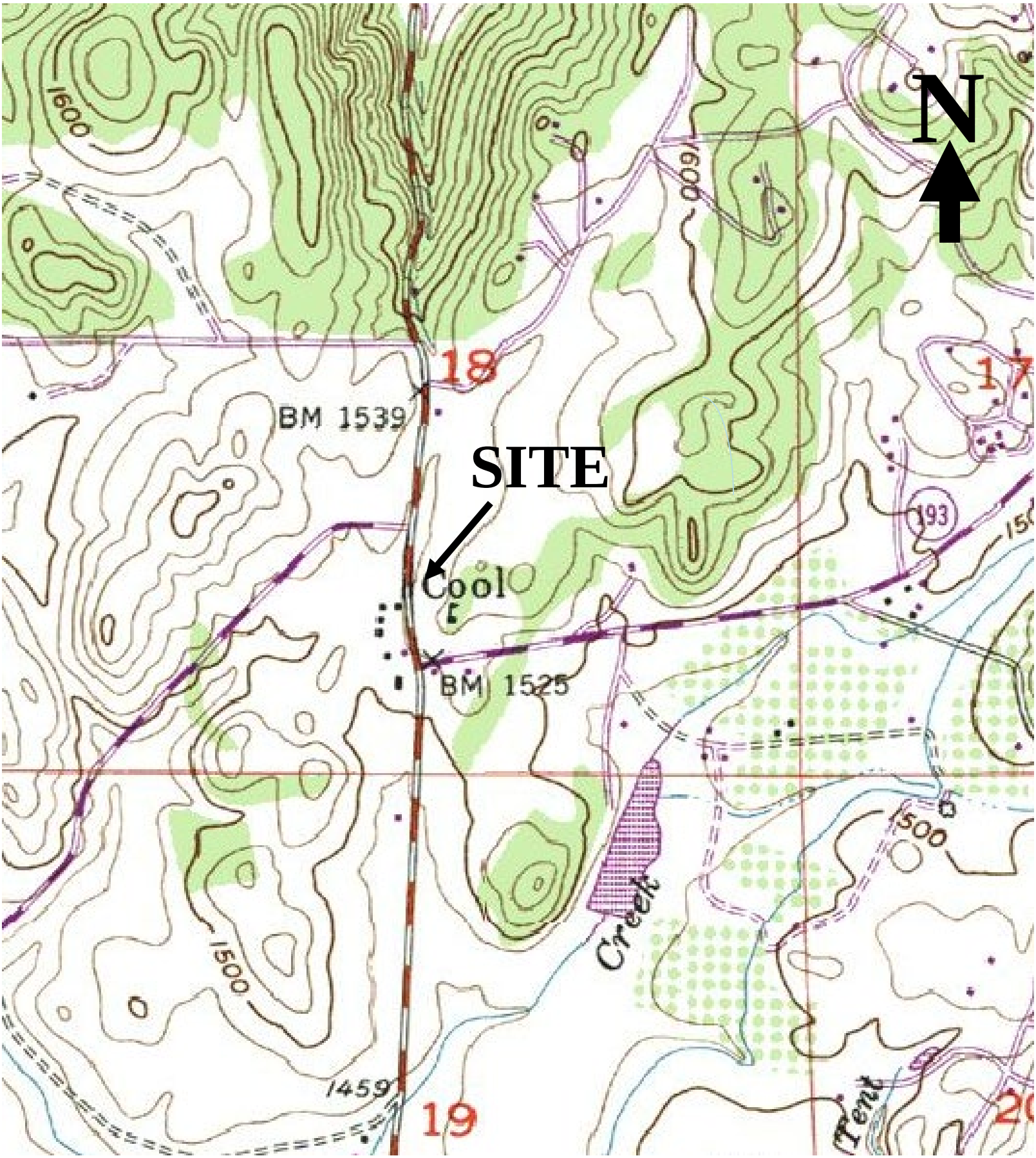
ENCLOSURE E: EL DORADO COUNTY OAK RESOURCES MANAGEMENT PLAN

ENCLOSURE A: SITE PHOTOS

BOLE & ASSOCIATES
6898 Penny Way, Browns Valley, CA 95918
(530) 415-6623, email: davidhbole@yahoo.com

SITE: APN 071-500-037, COOL, CA
ITEM: SITE PHOTOS
DATE: 6/11/2019 PLATE: 1

ENCLOSURE B: SITE MAPS AND AERIAL PHOTOS

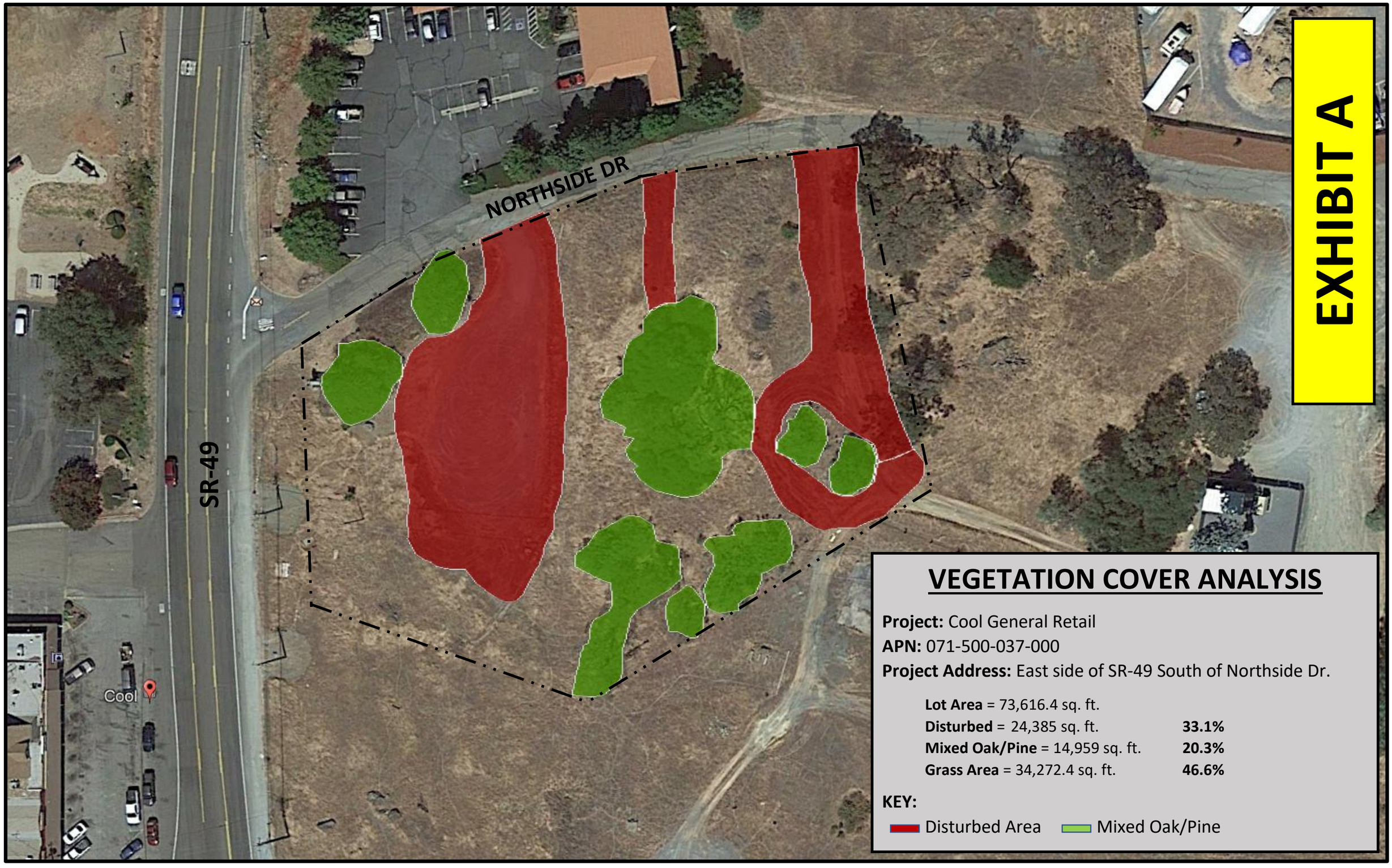


Site Location Map: APN 071-500-037, 1020 Northside Drive, Cool, El Dorado County, CA 95614. Section 18, Township 12 North, Range 9 East, Auburn (1981) USGS Quadrangle.

Figure 1

Vicinity Map: APN 071-500-037, 1020 Northside Drive, Cool, El Dorado County, CA 95614. Site is shown surrounded by undeveloped land and multiple tenant retail/shopping centers.

Figure 2



VEGETATION COVER ANALYSIS

Project: Cool General Retail

APN: 071-500-037-000

Project Address: East side of SR-49 South of Northside Dr.

Lot Area = 73,616.4 sq. ft.	
Disturbed = 24,385 sq. ft.	**33.1%**
Mixed Oak/Pine = 14,959 sq. ft.	**20.3%**
Grass Area = 34,272.4 sq. ft.	**46.6%**

KEY:

Disturbed Area Mixed Oak/Pine

BOLE & ASSOCIATES
6898 Penny Way, Browns Valley, CA 95918
(530) 415-6623, email: davidhbole@yahoo.com

SITE: APPROXIMATE LOCATIONS OF TREES >6” DBH
ITEM: SITE MAP- AERIAL OVERLAY

FIGURE 3

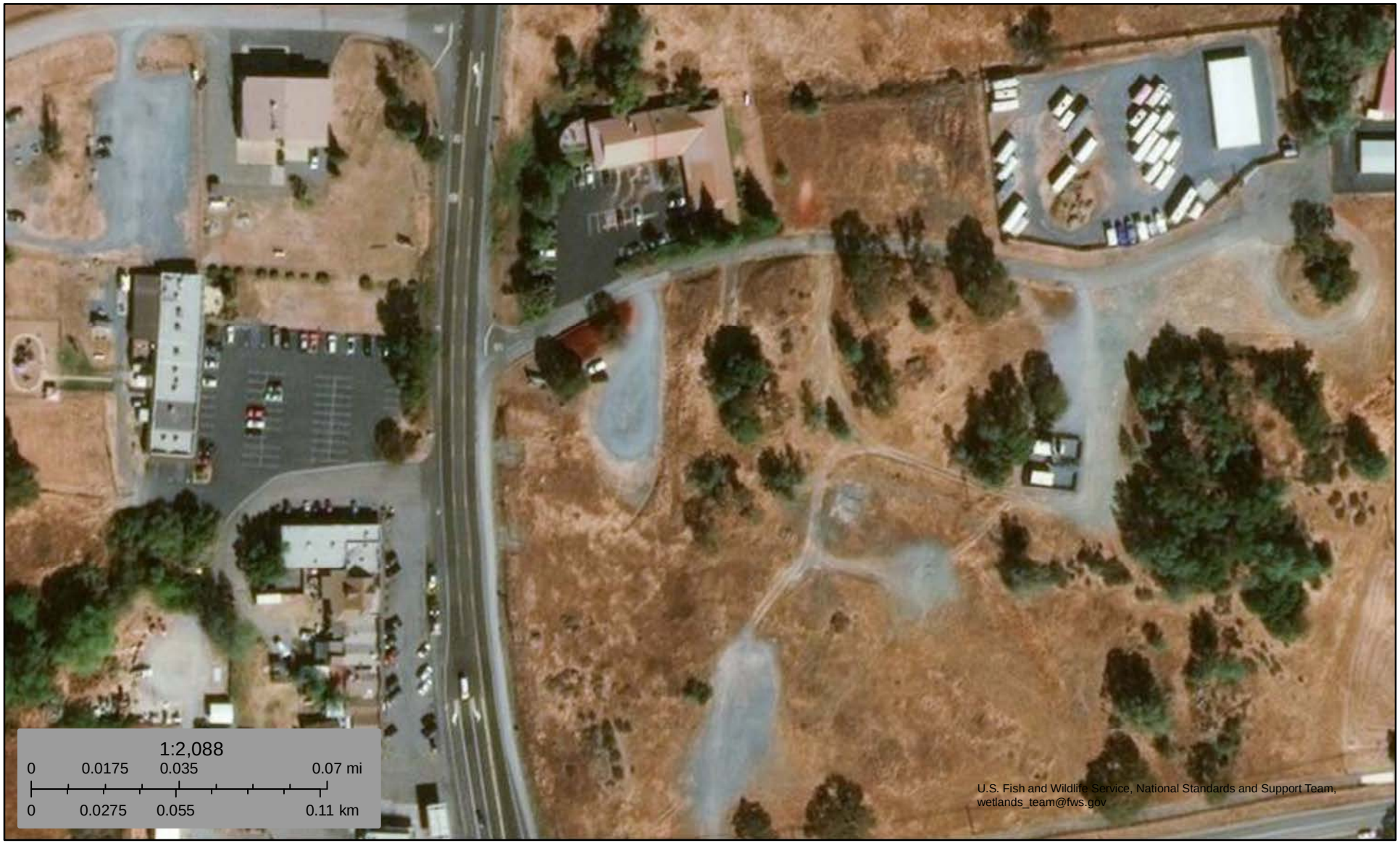
BOLE & ASSOCIATES
6898 Penny Way, Browns Valley, CA 95918
(530) 415-6623, email: davidhbole@yahoo.com

SITE: APPROXIMATE LOCATIONS OF TREES >6" DBH
ITEM: SITE MAP- AERIAL OVERLAY

FIGURE 3

U.S. Fish and Wildlife Service
National Wetlands Inventory

1020 Northside Drive NWI Map



June 17, 2019

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

ENCLOSURE C: SOIL DATA

Soil Map—El Dorado Area, California
(1020 Northside Drive Soils Map)

Map Scale: 1:732 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 35 70 140 210

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 10, Sep 12, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 20, 2017—Aug 8, 2017

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	0.2	8.3%
DeE	Delpiedra very rocky loam, 3 to 50 percent slopes	1.7	91.7%
Totals for Area of Interest		**1.8**	**100.0%**

ENCLOSURE D: USFWS SPECIAL STATUS SPECIES LIST AND CDFG CNDDB SPECIES TABLE

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: May 24, 2019
Consultation Code: 08ESMF00-2019-SLI-2276
Event Code: 08ESMF00-2019-E-07260
Project Name: 1020 Northside Drive

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2019-SLI-2276

Event Code: 08ESMF00-2019-E-07260

Project Name: 1020 Northside Drive

Project Type: DEVELOPMENT

Project Description: This will involve development of the parcel into a retail building.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/38.88840335061516N121.01544470414468W

Counties: El Dorado, CA

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii*	Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/2891

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus*	Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/321

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Auburn (3812181) OR Lake Combie (3912111) OR Pilot Hill (3812171) OR Wolf (3912112) OR Coloma (3812078) OR Gold Hill (3812182) OR Rocklin (3812172) OR Colfax (3912018) OR Greenwood (3812088))
 AND (Federal Listing Status IS (Endangered OR Threatened OR Proposed Endangered OR Proposed Threatened OR Candidate OR All CNDDB element occurrences OR Delisted) OR State Listing Status IS (Endangered OR Threatened OR Rare OR All CNDDB element occurrences OR Delisted OR Candidate Endangered OR Candidate Threatened))

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Agelaius tricolor tricolored blackbird	G2G3 S1S2	None Threatened	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_EN-Endangered NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	1,099 1,664	955 S:2	0	0	1	0	0	1	2	0	2	0	0
Allium jepsonii Jepson's onion	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive USFS_S-Sensitive	1,320 1,320	26 S:1	0	1	0	0	0	0	0	1	1	0	0
Ammonitella yatesii tight coin (=Yates' snail)	G1 S1	None None	IUCN_VU-Vulnerable	1,360 1,360	6 S:1	0	0	0	0	0	1	1	0	1	0	0
Andrena subapasta An andrenid bee	G1G2 S1S2	None None		1,325 1,525	5 S:2	0	0	0	0	0	2	2	0	2	0	0
Antrozous pallidus pallid bat	G5 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	726 726	420 S:1	0	0	0	0	0	1	0	1	1	0	0
Balsamorhiza macrolepis big-scale balsamroot	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive USFS_S-Sensitive	600 600	51 S:1	0	0	0	0	1	0	1	0	0	1	0
Banksula californica Alabaster Cave harvestman	GH SH	None None		650 650	1 S:1	0	0	0	0	1	0	1	0	0	1	0
Banksula galilei Galile's cave harvestman	G1 S1	None None		1,450 1,450	1 S:1	0	0	0	0	0	1	1	0	1	0	0

Information Expires 8/1/2020

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Bombus caliginosus obscure bumble bee	G4? S1S2	None None	IUCN_VU-Vulnerable	2,450 2,450	181 S:1	0	0	0	0	0	1	1	0	1	0	0
Bombus morrisoni Morrison bumble bee	G4G5 S1S2	None None	IUCN_VU-Vulnerable	1,300 1,300	85 S:1	0	0	0	0	0	1	1	0	1	0	0
Bombus occidentalis western bumble bee	G2G3 S1	None Candidate Endangered	USFS_S-Sensitive XERCES_IM-Imperiled	1,200 2,500	280 S:2	0	0	0	0	0	2	2	0	2	0	0
Branchinecta lynchi vernal pool fairy shrimp	G3 S3	Threatened None	IUCN_VU-Vulnerable	260 320	770 S:2	0	1	0	0	1	0	2	0	1	0	1
Calystegia stebbinsii Stebbins' morning-glory	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	1,000 1,000	15 S:1	1	0	0	0	0	0	0	1	1	0	0
Carex xerophila chaparral sedge	G2 S2	None None	Rare Plant Rank - 1B.2	915 915	15 S:1	1	0	0	0	0	0	0	1	1	0	0
Ceanothus roderickii Pine Hill ceanothus	G1 S1	Endangered Rare	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden	950 950	9 S:1	1	0	0	0	0	0	0	1	1	0	0
Chlorogalum grandiflorum Red Hills soaproot	G3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	1,000 2,360	137 S:5	0	2	2	0	0	1	0	5	5	0	0
Clarkia biloba ssp. brandegeeae Brandegee's clarkia	G4G5T4 S4	None None	Rare Plant Rank - 4.2 BLM_S-Sensitive	471 2,300	89 S:36	4	18	3	1	0	10	6	30	36	0	0
Corynorhinus townsendii Townsend's big-eared bat	G3G4 S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	725 1,300	635 S:3	0	0	0	0	0	3	2	1	3	0	0
Cosumnoperla hypocrena Cosumnes stripetail	G2 S2	None None		961 1,391	12 S:5	0	0	0	0	0	5	5	0	5	0	0

Information Expires 8/1/2020

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Crocanthemum suffrutescens Bisbee Peak rush-rose	G2?Q S2?	None None	Rare Plant Rank - 3.2	600 1,100	31 S:6	1	2	0	0	0	3	4	2	6	0	0
Desmocerus californicus dimorphus valley elderberry longhorn beetle	G3T2 S2	Threatened None		320 1,875	271 S:12	2	2	3	2	1	2	5	7	11	1	0
Elanus leucurus white-tailed kite	G5 S3S4	None None	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern	400 400	180 S:1	0	1	0	0	0	0	0	1	1	0	0
Emys marmorata western pond turtle	G3G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	270 1,520	1385 S:7	2	1	0	0	0	4	4	3	7	0	0
Erethizon dorsatum North American porcupine	G5 S3	None None	IUCN_LC-Least Concern	1,696 1,696	523 S:1	0	0	0	0	0	1	1	0	1	0	0
Falco peregrinus anatum American peregrine falcon	G4T4 S3S4	Delisted Delisted	CDF_S-Sensitive CDFW_FP-Fully Protected USFWS_BCC-Birds of Conservation Concern	1,161 1,161	56 S:1	0	1	0	0	0	0	0	1	1	0	0
Fritillaria eastwoodiae Butte County fritillary	G3Q S3	None None	Rare Plant Rank - 3.2 USFS_S-Sensitive	900 1,500	235 S:2	0	0	0	0	0	2	2	0	2	0	0
Galium californicum ssp. sierrae El Dorado bedstraw	G5T1 S1	Endangered Rare	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	440 1,050	17 S:4	2	0	0	0	0	2	3	1	4	0	0
Gratiola heterosepala Boggs Lake hedge-hyssop	G2 S2	None Endangered	Rare Plant Rank - 1B.2 BLM_S-Sensitive	290 290	99 S:1	0	0	0	0	1	0	1	0	0	0	1

Information Expires 8/1/2020

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Haliaeetus leucocephalus bald eagle	G5 S3	Delisted Endangered	BLM_S-Sensitive CDF_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	475 475	327 S:2	0	1	0	0	0	1	0	2	2	0	0
Laterallus jamaicensis coturniculus California black rail	G3G4T1 S1	None Threatened	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_NT-Near Threatened NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	360 1,400	303 S:8	1	0	0	0	0	7	5	3	8	0	0
Lathyrus sulphureus var. argillaceus dubious pea	G5T1T2Q S1S2	None None	Rare Plant Rank - 3		7 S:2	0	0	0	0	0	2	2	0	2	0	0
Linderiella occidentalis California linderiella	G2G3 S2S3	None None	IUCN_NT-Near Threatened	520 520	438 S:1	0	0	0	0	0	1	0	1	1	0	0
Margaritifera falcata western pearlshell	G4G5 S1S2	None None		965 965	78 S:1	0	0	0	0	0	1	0	1	1	0	0
Northern Volcanic Mud Flow Vernal Pool Northern Volcanic Mud Flow Vernal Pool	G1 S1.1	None None		240 400	7 S:3	0	0	0	0	0	3	3	0	3	0	0
Oncorhynchus mykiss irideus pop. 11 steelhead - Central Valley DPS	G5T2Q S2	Threatened None	AFS_TH-Threatened		31 S:2	0	0	0	1	0	1	0	2	2	0	0
Packera layneae Layne's ragwort	G2 S2	Threatened Rare	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley SB_UCSC-UC Santa Cruz	680 1,760	48 S:9	0	1	1	0	0	7	7	2	9	0	0
Pandion haliaetus osprey	G5 S4	None None	CDF_S-Sensitive CDFW_WL-Watch List IUCN_LC-Least Concern	575 575	504 S:1	0	0	1	0	0	0	0	1	1	0	0

Information Expires 8/1/2020

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Pekania pennanti fisher - West Coast DPS	G5T2T3Q S2S3	None Threatened	BLM_S-Sensitive CDFW_SSC-Species of Special Concern USFS_S-Sensitive	2,000 2,400	743 S:2	0	0	0	0	0	2	2	0	2	0	0
Phrynosoma blainvillii coast horned lizard	G3G4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	2,400 2,400	784 S:2	0	0	0	0	0	2	2	0	2	0	0
Poa sierrae Sierra blue grass	G3 S3	None None	Rare Plant Rank - 1B.3 USFS_S-Sensitive	1,200 1,200	61 S:1	0	0	0	0	0	1	1	0	1	0	0
Progne subis purple martin	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	216 216	71 S:1	0	1	0	0	0	0	0	1	1	0	0
Rana boylii foothill yellow-legged frog	G3 S3	None Candidate Threatened	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened USFS_S-Sensitive	540 2,744	2468 S:33	7	6	4	0	2	14	6	27	31	0	2
Riparia riparia bank swallow	G5 S2	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern	2,000 2,000	298 S:1	0	0	0	0	0	1	1	0	1	0	0
Viburnum ellipticum oval-leaved viburnum	G4G5 S3?	None None	Rare Plant Rank - 2B.3	1,300 1,400	39 S:3	0	2	0	0	0	1	0	3	3	0	0
Wyethia reticulata El Dorado County mule ears	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden	400 1,000	25 S:4	1	0	1	0	0	2	2	2	4	0	0

Information Expires 8/1/2020

Multiple Occurrences per Page

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Auburn (3812181) OR Lake Combie (3912111) OR Pilot Hill (3812171) OR Wolf (3912112) OR Coloma (3812078) OR Gold Hill (3812182) OR Rocklin (3812172) OR Colfax (3912018) OR Greenwood (3812088))
 AND (Federal Listing Status IS (Endangered OR Threatened OR Proposed Endangered OR Proposed Threatened OR Candidate OR All CNDDB element occurrences OR Delisted) OR State Listing Status IS (Endangered OR Threatened OR Rare OR All CNDDB element occurrences OR Delisted OR Candidate Endangered OR Candidate Threatened))

Rana boylii **Element Code:** AAABH01050

foothill yellow-legged frog

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G3
	State:	Candidate Threatened		**State:**	S3
	Other:	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened, USFS_S-Sensitive			
Habitat:	**General:**	PARTLY-SHADED, SHALLOW STREAMS AND RIFFLES WITH A ROCKY SUBSTRATE IN A VARIETY OF HABITATS.			
	Micro:	NEEDS AT LEAST SOME COBBLE-SIZED SUBSTRATE FOR EGG-LAYING. NEEDS AT LEAST 15 WEEKS TO ATTAIN METAMORPHOSIS.			

Occurrence No.	301	**Map Index:**	45495	**EO Index:**	45495	**Element Last Seen:**	2000-04-20
Occ. Rank:	Excellent			**Presence:**	Presumed Extant	**Site Last Seen:**	2000-04-20
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2018-05-08

Quad Summary:	Colfax (3912018)
County Summary:	Placer

Lat/Long:	39.04266 / -120.92382	**Accuracy:**	80 meters
UTM:	Zone-10 N4323561 E679680	**Elevation (ft):**	1420
PLSS:	T14N, R09E, Sec. 24, SE (M)	**Acres:**	0.0

Location:	2.75 AIR MILES EAST OF WEIMAR, NEAR BAUER MINE ALONG YANKEE JIM ROAD, AUBURN STATE RECREATION AREA.
Detailed Location:	WATERFALL ON SOUTH-FACING SLOPE ALONG YANKEE JIM ROAD.
Ecological:	AQUATIC HABITAT IN FOOTHILL WOODLAND: QUERCUS CHRYSOLEPIS, PINUS SABINIANA AND AESCULUS CALIFORNICA. SUBSTRATE IS A RED SHALE.
General:	1 ADULT FOUND ON 20 APR 2000.
Owner/Manager:	DPR-AUBURN SRA

Occurrence No.	389	**Map Index:**	53198	**EO Index:**	53198	**Element Last Seen:**	2004-07-16
Occ. Rank:	Excellent			**Presence:**	Presumed Extant	**Site Last Seen:**	2004-07-16
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2018-09-19

Quad Summary:	Coloma (3812078)
County Summary:	El Dorado

Lat/Long:	38.83467 / -120.90623	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4300513 E681732	**Elevation (ft):**	1000
PLSS:	T11N, R10E, Sec. 06 (M)	**Acres:**	70.3

Location:	INDIAN CREEK, ABOUT 1 MILE NORTH OF CONFLUENCE WITH SOUTH FORK AMERICAN RIVER, NORTH OF COLOMA.
Detailed Location:	SITE CB-27.
Ecological:	HABITAT CONSISTS OF A PERENNIAL STREAM WITH INTERMITTENT POOLS. SUBSTRATE PRIMARILY COBBLE WITH SOME BEDROCK. BLACKBERRY COVER ASSOCIATED WITH POOLS AND WETTED SECTIONS. POOLS SEPARATED BY SEGMENTS OF DRY BARREN CHANNEL.
General:	OVER 100 INDIVIDUALS OF ALL AGE CLASSES OBSERVED ON 27 OCT 2003. 14 TADPOLES AND 1 ADULT OBSERVED ON 16 JUL 2004.
Owner/Manager:	BLM

Occurrence No.	392	**Map Index:**	53509	**EO Index:**	53509	**Element Last Seen:**	2016-06-10
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2016-06-10
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2019-08-08

Quad Summary:	Greenwood (3812088)
County Summary:	El Dorado, Placer

Lat/Long:	38.96267 / -120.92802	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4314676 E679519	**Elevation (ft):**	768
PLSS:	T13N, R09E, Sec. 24, W (M)	**Acres:**	90.0

Location:	MIDDLE FORK AMERICAN RIVER AT PARADISE CANYON AND GAS CANYON, AUBURN STATE RECREATION AREA.
Detailed Location:	ALONG MIDDLE FORK AMERICAN RIVER FROM JUST UPSTREAM OF PARADISE CANYON (TODD CREEK) TO JUST DOWNSTREAM OF GAS CANYON, AND ALSO EXTENDING ABOUT 1/4 MILE UP BOTH PARADISE CANYON AND GAS CANYON.
Ecological:	HABITAT CONSISTED OF WILLOW COTTONWOOD RIPARIAN CREEK WITH STEEP WATERSHED. VEGETATION INCLUDED SAND BAR & BLACK WILLOW, ALDER, BLACKBERRY, WILD GRAPE AND WHITE ALDER; SURROUNDED BY INTERIOR LIVE OAK WOODLAND & FOOTHILL PINE HABITAT.
General:	13 FROGS FOUND ON 2 NOV 2003. 16 FOUND IN 2005. 33 ADULTS, 12 JUVENILES & 5 EGG MASSES FOUND ACROSS 3 SURVEY DATES IN 2007. EGG MASSES DETECTED IN 2009-2010. 17 FOUND ON 10 JUN 2016.
Owner/Manager:	BLM

Occurrence No.	455	**Map Index:**	69653	**EO Index:**	70433	**Element Last Seen:**	2016-07-12
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2016-07-12
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2019-08-06

Quad Summary:	Greenwood (3812088), Colfax (3912018)
County Summary:	Placer

Lat/Long:	38.99965 / -120.94171	**Accuracy:**	specific area
UTM:	Zone-10 N4318753 E678239	**Elevation (ft):**	840
PLSS:	T13N, R09E, Sec. 11, NE (M)	**Acres:**	10.0

Location:	NORTH FORK AMERICAN RIVER, JUST DOWNSTREAM FROM PONDEROSA WAY BRIDGE AT JEFFERSON CANYON, AUBURN STATE RECREATION AREA.
Detailed Location:	MAPPED TO PROVIDED COORDINATES.
Ecological:	HABITAT CONSISTS OF AN AQUATIC SUBSTRATE DOMINATED BY BOULDER/COBBLE; LIMITED RIPARIAN SHADING (WILLOWS). AVERAGE WATER DEPTH WAS ~20-30 CM. WATER TURBIDITY WAS LOW; WATER WAS CLEAR. A ROCK DAM WAS BUILT AT THE TOP OF THE SIDE CHANNEL.
General:	5 ADULTS AND 8 SUBADULTS OBSERVED ON 26 MAY 2007. MORE THAN 10 ADULTS & MORE THAN 100 YOUNG-OF-YEAR OBSERVED ON 4 OCT 2007. 5 DETECTED ON 12 JUL 2016.
Owner/Manager:	USBOR-AUBURN SRA

Occurrence No.	457	**Map Index:**	69655	**EO Index:**	70435	**Element Last Seen:**	2016-08-17
Occ. Rank:	Excellent			**Presence:**	Presumed Extant	**Site Last Seen:**	2016-08-17
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2019-08-06

Quad Summary:	Colfax (3912018)
County Summary:	Placer

Lat/Long:	39.10516 / -120.92476	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4330497 E679441	**Elevation (ft):**	1127
PLSS:	T15N, R09E, Sec. 36 (M)	**Acres:**	99.0

Location:	NORTH FORK AMERICAN RIVER NEAR IOWA HILL ROAD CROSSING, 1.5 MILES EAST OF COLFAX.
Detailed Location:	MAPPED ALONG THE RIVER FROM 1.2 MILES UPSTREAM TO 0.2 MILE DOWNSTREAM OF THE IOWA HILL ROAD BRIDGE.
Ecological:	HABITAT CONSISTED OF RIVERINE, WITH EXPOSED, ROCKY BEACH. MODERATE-STEEP GRADIENT CRK WITH BEDROCK CASCADE/POOL HABITATS. SUBSTRATE IN POOLS INCLUDED BOULDER/BEDROCK OR COBBLE/GRAVEL. HEAVY RECREATIONAL USE. TROUT, SMALL MOUTH BASS PRESENT.
General:	DETECTED IN 1975. 5 FOUND IN 1997; 26 IN 2005. 2 METAMORPHS IN 2006. 20 ADULTS & 5 EGG MASSES IN 2008. MANY OF VARIOUS AGES IN 2009 & 2010. 10 ADULTS, 1 JUVENILE, AND 5 EGG MASSES IN 2013. 2 EGG MASSES IN 2014. 9 IN 2015. 54 IN 2016.
Owner/Manager:	BLM, DPR-AUBURN SRA

Occurrence No.	472	**Map Index:**	69742	**EO Index:**	70552	**Element Last Seen:**	2007-08-09
Occ. Rank:	Fair			**Presence:**	Presumed Extant	**Site Last Seen:**	2007-08-09
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2007-08-16

Quad Summary:	Colfax (3912018)
County Summary:	Placer

Lat/Long:	39.11209 / -120.94084	**Accuracy:**	80 meters
UTM:	Zone-10 N4331234 E678031	**Elevation (ft):**	2117
PLSS:	T15N, R09E, Sec. 35, NW (M)	**Acres:**	0.0

Location:	UNNAMED TRIBUTARY TO NORTH FORK AMERICAN RIVER, 1 MILE NE OF COLFAX.
Detailed Location:	SITE IS LOCATED AT THE STEVENS TRAIL CROSSING.
Ecological:	HABITAT CONSISTS OF ALDER RIPARIAN SURROUNDING A SMALL TRIBUTARY CREEK; QUITE A BIT OF BLACKBERRY ALONG BANKS.
General:	2 ADULTS OBSERVED ON 9 AUG 2007.
Owner/Manager:	BLM

Occurrence No.	487	**Map Index:**	73915	**EO Index:**	74910	**Element Last Seen:**	2019-07-20
Occ. Rank:	Excellent			**Presence:**	Presumed Extant	**Site Last Seen:**	2019-07-20
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2019-07-30

Quad Summary:	Colfax (3912018)
County Summary:	Placer

Lat/Long:	39.03858 / -120.90253	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4323151 E681534	**Elevation (ft):**	922
PLSS:	T14N, R10E, Sec. 30, N (M)	**Acres:**	128.0

Location:	NORTH FORK AMERICAN RIVER AT SHIRTTAIL CANYON AND BUNCH CANYON, AUBURN STATE RECREATION AREA, WEST OF FORESTHILL.
Detailed Location:	MAPPED ACCORDING TO PROVIDED COORDINATES, ALONG THIS STRETCH OF NORTH FORK AMERICAN RIVER AND ALSO SLIGHTLY UPSTREAM ALONG SHIRTAIL, BUNCH AND DEVILS CANYONS.
Ecological:	POOLS, CREEKS, AND RIVER WITH COBBLE SUBSTRATE AND VARIOUS LEVELS OF SHADE. OPEN SPACE WITH RECREATIONAL USE. LIKELY SOME DISTURBANCE FROM HUMAN RECREATION AND ADJACENT ROAD.
General:	DETECTED ON 18 JUL 1975. 36 ADULTS & 45 JUVENILES ON 18 MAY 2007. 40 AD, 37 JUV, 5550 LARVAE ON 4 JUN 2007. 104 AD, 393 JUV, 74 LARV ON 20 AUG 2007. 11 AD ON 17 MAY 2008. 15 DETECTED 13 JUN & 14 ON 21 JUL 2016. 20+ AD OBS ON 20 JUL 2019.
Owner/Manager:	DPR-AUBURN SRA, BLM

Occurrence No.	490	**Map Index:**	73919	**EO Index:**	74916	**Element Last Seen:**	2008-04-10
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2008-04-10
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2009-03-13

Quad Summary:	Greenwood (3812088)
County Summary:	Placer

Lat/Long:	38.99713 / -120.95558	**Accuracy:**	80 meters
UTM:	Zone-10 N4318446 E677044	**Elevation (ft):**	920
PLSS:	T13N, R09E, Sec. 10, NE (M)	**Acres:**	0.0

Location:	CODFISH FALLS, ABOUT 0.35 MI N OF CODFISH CREEK AND N FORK AMERICAN RIVER CROSSING, ABOUT 1.9 MI E OF APPLEGATE.
Detailed Location:	MAPPED TO POINT ON PROVIDED MAP.
Ecological:	CREEK CONTAINING POOLS AND SHADED BY RIPARIAN VEGETATION.
General:	4 ADULTS (2-3 INCH SNOUT-VENT-LENGTH) CASUALLY OBSERVED; MANY MORE LIKELY PRESENT.
Owner/Manager:	DPR-AUBURN SRA

Occurrence No.	491	**Map Index:**	73921	**EO Index:**	74918	**Element Last Seen:**	2019-06-30
Occ. Rank:	Excellent			**Presence:**	Presumed Extant	**Site Last Seen:**	2019-06-30
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2019-07-02

Quad Summary:	Greenwood (3812088)
County Summary:	El Dorado, Placer

Lat/Long:	38.93518 / -120.94358	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4311594 E678239	**Elevation (ft):**	675
PLSS:	T13N, R09E, Sec. 35, S (M)	**Acres:**	81.0

Location:	MIDDLE FORK AMERICAN RIVER AT AMERICAN CANYON, AUBURN STATE RECREATION AREA, ABOUT 6 MILES EAST OF AUBURN.
Detailed Location:	SURVEY SITES EXENDING ALONG BOTH MIDDLE FORK AMERICAN RIVER AND ALSO AMERICAN CANYON.
Ecological:	AMERICAN CANYON CREEK IS A NARROW PERENNIAL STREAM WITH SECTIONS OF COBBLE RUNS ALTERNATING WITH STEEPER BEDROCK CASCADES & POOL SECTIONS. RIPARIAN VEGETATION PATCHY. SITE DISTURBED BY LIGHT RECREATION. TRAIL CROSSES CREEK A FEW TIMES.
General:	13 DETECTED IN 2005. 7 ADULTS, 2 SUBADULTS, 22 YOUNG-OF-YEAR OBSERVED 24 SEP 2007. 18 ADULTS, 1 JUVENILE, 1 OF UNKNOWN AGE, AND 7 EGG MASSES OBSERVED ON 25 APR 2013. 20 DETECTED ON 2 MAY 2016. 12 ADULTS AND 1 LARVA ON 30 JUN 2019.
Owner/Manager:	DPR, BOR

Occurrence No.	526	**Map Index:**	74074	**EO Index:**	75066	**Element Last Seen:**	2008-06-15
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2008-06-15
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2018-09-13

Quad Summary:	Colfax (3912018)
County Summary:	Nevada, Placer

Lat/Long:	39.10640 / -120.98789	**Accuracy:**	specific area
UTM:	Zone-10 N4330511 E673978	**Elevation (ft):**	1790
PLSS:	T15N, R09E, Sec. 32, SE (M)	**Acres:**	8.0

Location:	BEAR RIVER, 1.4 MILES NORTH OF ITS CONFLUENCE WITH CAMPBELL CREEK, ABOUT 2 MILES WEST OF COLFAX.
Detailed Location:	MAPPED TO PROVIDED COORDINATES.
Ecological:	HABITAT CONSISTED OF SIDE CHANNEL AND GLIDE. SUBSTRATE INCLUDED COBBLE, SILT, CLAY, AND MUD. MODERATE RIPARIAN CANOPY COMPRISED OF WILLOW AND ALDER. GRAVEL MINING OPERATION ADJACENT TO RIVER. DREDGE HOLES PRESENT IN MAINSTEM.
General:	3 JUVENILES WERE FOUND ON 15 JUN 2008.
Owner/Manager:	UNKNOWN

Occurrence No.	527	**Map Index:**	74075	**EO Index:**	75067	**Element Last Seen:**	2016-06-08
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2016-06-08
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2018-09-17

Quad Summary:	Colfax (3912018)
County Summary:	Nevada, Placer

Lat/Long:	39.08255 / -120.99037	**Accuracy:**	specific area
UTM:	Zone-10 N4327860 E673822	**Elevation (ft):**	1745
PLSS:	T14N, R09E, Sec. 8, NE (M)	**Acres:**	48.0

Location:	BEAR RIVER, FROM 0.3 MILE NORTH TO 0.7 MILE SOUTH OF ITS CONFLUENCE WITH CAMPBELL CREEK, ABOUT 2 MILES WEST OF COLFAX.
Detailed Location:	MAPPED TO PROVIDED COORDINATES.
Ecological:	LOW TO HIGH GRADIENT RIFFLES, RUNS, EDGWATER, SIDE CHANNEL AND POOLS WITH EXPOSED AND PROTECTED BANKS. SUBSTRATE INCLUDED BEDROCK, BOULDER, COBBLE, GRAVEL, SAND, SILT, MUD, AND CLAY.
General:	1 JUVENILE & 1 UNKNOWN AGE INDIVIDUAL OBSERVED ON 9 JUN 2008. 5 ADULTS & 3 JUVENILES OBSERVED 24 JUN 2008. 6 ADULTS OBSERVED 28 AUG 2008. 2 ADULTS OBSERVED ON 8 JUN 2016.
Owner/Manager:	DFG-BEAR RIVER FA

Occurrence No.	528	**Map Index:**	74076	**EO Index:**	75068	**Element Last Seen:**	2015-03-06
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2015-03-06
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2018-09-14

Quad Summary:	Lake Combie (3912111)
County Summary:	Nevada, Placer

Lat/Long:	39.05912 / -121.00824	**Accuracy:**	specific area
UTM:	Zone-10 N4325225 E672333	**Elevation (ft):**	1700
PLSS:	T14N, R09E, Sec. 18, SE (M)	**Acres:**	16.0

Location:	0.4 MILE SW OF DOG BAR BRIDGE ALONG BEAR RIVER, 4 MILES SW OF COLFAX.
Detailed Location:	MAPPED TO PROVIDED COORDINATES.
Ecological:	BACKWATER POOL, EDGEWATER, GLIDE, AND RUN HABITATS. SUBSTRATES INCLUDED COBBLES AND BOULDERS. SPARSE RIPARIAN CANOPY. LONG SECTIONS HEAVILY VEGETATED WITH BLACKBERRY. HIGH RECREATIONAL USE AND DEBRIS LIKELY DUE TO EASE OF ACCESS.
General:	2 JUVENILES OBSERVED ON 28 SEP 2007. 2 JUVENILES IN JUN 2008. 1 ADULT ON 23 MAR 2013. 2 JUVENILES ON 6 MAR 2015.
Owner/Manager:	PVT

Occurrence No.	741	**Map Index:**	74896	**EO Index:**	75902	**Element Last Seen:**	2008-04-26
Occ. Rank:	Excellent			**Presence:**	Presumed Extant	**Site Last Seen:**	2008-04-26
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2009-05-11

Quad Summary:	Colfax (3912018)
County Summary:	Placer

Lat/Long:	39.08551 / -120.91566	**Accuracy:**	80 meters
UTM:	Zone-10 N4328333 E680277	**Elevation (ft):**	1370
PLSS:	T14N, R09E, Sec. 12, NE (M)	**Acres:**	0.0

Location:	ALONG UNNAMED TRIBUTARY JUST NE OF NORTH FK AMERICAN RIVER CONFLUENCE; 0.5 MI SSE OF DINNER TREE, 2 MI ESE OF COLFAX.
Detailed Location:	MAPPED TO PROVIDED COORDINATES. "OBSERVATION NEAR WINDY POINT TRAIL CROSSING."
Ecological:	HABITAT CONSISTED OF STEEP GRADIENT CREEK WITH MODERATE-DENSE RIPARIAN CANOPY. BOULDER DOMINATED SUBSTRATE WITH AUBNDANT PLUNGE POOLS. BOTH FEMALES OBSERVED GRAVID. SURROUNDING LAND USED FOR SOME RECREATION ASSOCIATED WITH HIKING TRAIL.
General:	2 GRAVID FEMALE ADULTS & 1 UNKNOWN ADULT OBSERVED ON 26 APR 2008.
Owner/Manager:	BLM

Occurrence No.	1767	**Map Index:**	A8790	**EO Index:**	110584	**Element Last Seen:**	2009-07-24
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2009-07-24
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2018-09-13

Quad Summary:	Colfax (3912018)
County Summary:	Nevada, Placer

Lat/Long:	39.06804 / -120.99795	**Accuracy:**	specific area
UTM:	Zone-10 N4326234 E673202	**Elevation (ft):**	1700
PLSS:	T14N, R09E, Sec. 17, N (M)	**Acres:**	21.0

Location:	BEAR RIVER, 0.5 MILE NE OF THE DOG BAR ROAD BRIDGE, ABOUT 3 AIR MILES NW OF WEIMAR.
Detailed Location:	MAPPED TO COORDINATES PROVIDED.
Ecological:	DOMINANT SUBSTRATE CONSISTED OF BEDROCK AND COBBLE. FOUND IN SIDE CHANNEL AND EDGE WATER. SUBSTANTIAL RIPARIAN CANOPY COMPRISED OF WILLOW AND ALDER. HIGH RECREATIONAL USE FROM CAMPGROUND AND RAFTING ON LEFT BANK.
General:	3 ADULTS AND 1 JUVENILE OBSERVED IN JUN 2009. 1 ADULT FOUND ON 24 JUL 2009.
Owner/Manager:	DFG-BEAR RIVER FA, UNK

Occurrence No.	1832	**Map Index:**	A8949	**EO Index:**	110748	**Element Last Seen:**	2018-04-04
Occ. Rank:	Fair			**Presence:**	Presumed Extant	**Site Last Seen:**	2018-04-04
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2018-04-17

Quad Summary:	Colfax (3912018)
County Summary:	Placer

Lat/Long:	39.07414 / -120.94119	**Accuracy:**	specific area
UTM:	Zone-10 N4327022 E678098	**Elevation (ft):**	1950
PLSS:	T14N, R09E, Sec. 11, S (M)	**Acres:**	11.0

Location:	SMUTHERS RAVINE, 1 MILE NORTH OF BUNCH CANYON, ABOUT 2 MILES SOUTH OF COLFAX.
Detailed Location:	
Ecological:	CLASS I CREEK, PARTIALLY SHADED, GRAVEL/COBBLE SUBSTRATE, USED AS A SKID CROSSING FOR A LOGGING OPERATION 45 YEARS AGO SO IT WAS FLATTENED OUT COMPARED TO SURROUNDING HABITAT. RESIDENTIAL, SMALL FARM IN PAST, INFREQUENT LOGGING.
General:	2 ADULTS OBSERVED ON 4 APR 2018 DURING EVALUATION FOR STREAMBED ALTERATION PERMIT.
Owner/Manager:	PVT

Occurrence No.	1882	**Map Index:**	A9229	**EO Index:**	111069	**Element Last Seen:**	1994-06-01
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1994-06-01
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2018-05-01

Quad Summary:	Colfax (3912018), Chicago Park (3912028)
County Summary:	Placer

Lat/Long:	39.1284 / -120.91637	**Accuracy:**	2/5 mile
UTM:	Zone-10 N4333092 E680107	**Elevation (ft):**	2744
PLSS:	T15N, R09E, Sec. 25, NE (M)	**Acres:**	280.0

Location:	NW OF CONFLUENCE OF SECRET RAVINE AND NORTH FORK AMERICAN RIVER, NEAR CAPE HORN, SE OF ROLLINS RESERVOIR.
Detailed Location:	LOCALITY DESCRIBED AS OFF CAPEHORN E ROAD, T14N, R9E, NE 1/4 OF SECTION 25. TOWNSHIP APPEARS INCORRECT AND SHOULD HAVE BEEN GIVEN AS T15N.
Ecological:	
General:	1 ADULT DETECTED ON 1 JUN 1994.
Owner/Manager:	UNKNOWN

Occurrence No.	1883	**Map Index:**	A9231	**EO Index:**	111071	**Element Last Seen:**	200X-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	200X-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2018-09-21

Quad Summary:	Colfax (3912018)
County Summary:	Placer

Lat/Long:	39.04776 / -120.8831	**Accuracy:**	1/5 mile
UTM:	Zone-10 N4324209 E683191	**Elevation (ft):**	1348
PLSS:	T14N, R10E, Sec. 20, NW (M)	**Acres:**	70.0

Location:	SHIRTTAIL CANYON CREEK AT SHIRTTAIL CANYON ROAD, ABOUT 4 MILES NW OF FORESTHILL.
Detailed Location:	GIVEN LOCALITY: "SHIRTTAIL CR. N OF CROSSING ON YANKEE JIMS-IOWA HILL RD" (1975), AND "SMALL STREAM IN SHIRT TAIL CANYON, ALONG SHIRT TAIL CANYON RD, 1.1 KM WEST OF INTERSECTION WITH YANKEE JIMS RD" (2000S).
Ecological:	
General:	DETECTED ON 18 JUL 1975. COLLECTED IN THE 2000S FOR GENETICS STUDY.
Owner/Manager:	UNKNOWN

Occurrence No.	1889	**Map Index:**	A9244	**EO Index:**	111085	**Element Last Seen:**	1953-04-12
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2007-08-20
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2018-05-02

Quad Summary:	Auburn (3812181)
County Summary:	El Dorado, Placer

Lat/Long:	38.91551 / -121.03766	**Accuracy:**	1/5 mile
UTM:	Zone-10 N4309231 E670131	**Elevation (ft):**	540
PLSS:	T12N, R08E, Sec. 1, SW (M)	**Acres:**	70.0

Location:	NORTH FORK AMERICAN RIVER AT CONFLUENCE WITH MIDDLE FORK AMERICAN RIVER, AUBURN STATE RECREATION AREA, EAST OF AUBURN.
Detailed Location:	
Ecological:	STREAM IN MODERATELY STEEP CANYON. FEW COBBLE POINT, SIDE BARS, AND SOME MID-CHANNEL BARS. BEDROCK AND SAND SUBSTRATE. RIPARIAN VEGETATION PATCHY, LOW CANOPY COVER. SUITABLE BREEDING AREAS NOT PRESENT DUE TO DOMINANCE OF LONG DEEP POOLS.
General:	COLLECTED ON 11 APR 1952 AND 12 APR 1953. NONE DETECTED BETWEEN 21 MAY AND 20 AUG 2007.
Owner/Manager:	USBOR

Occurrence No.	1890	**Map Index:**	A9245	**EO Index:**	111088	**Element Last Seen:**	2018-05-28
Occ. Rank:	Fair			**Presence:**	Presumed Extant	**Site Last Seen:**	2018-05-28
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2018-09-17

Quad Summary:	Greenwood (3812088)
County Summary:	Placer

Lat/Long:	38.9679 / -120.96647	**Accuracy:**	2/5 mile
UTM:	Zone-10 N4315181 E676174	**Elevation (ft):**	720
PLSS:	T13N, R09E, Sec. 22, NW (M)	**Acres:**	280.0

Location:	NORTH FORK AMERICAN RIVER, JUST NE OF LAKE CLEMENTINE, NEAR LONG POINT, AUBURN STATE RECREATION AREA.
Detailed Location:	1998 LOCALITY DESCRIBED AS NORTH FORK OF THE AMERICAN RIVER, ON STRETCH JUST ABOVE LAKE CLEMENTINE.
Ecological:	GRAVEL BAR AND A BACKWATER SLOUGH THAT DUMPED INTO THE MAIN STEM OF THE RIVER. LAND USED FOR RECREATION. GOOD SITE CONDITIONS BUT NOT A LOT OF FROGS.
General:	4 ADULTS DETECTED ON 5 JUL 1998. 2 ADULTS FOUND ON 28 MAY 2018.
Owner/Manager:	BLM, USBOR

Occurrence No.	1906	**Map Index:**	A9299	**EO Index:**	111143	**Element Last Seen:**	1953-05-01
Occ. Rank:	None			**Presence:**	Extirpated	**Site Last Seen:**	2003-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2018-09-18

Quad Summary: Coloma (3812078)

County Summary: El Dorado

Lat/Long:	38.82631 / -120.94961	**Accuracy:**	2/5 mile
UTM:	Zone-10 N4299500 E677988	**Elevation (ft):**	729
PLSS:	T11N, R09E, Sec. 11, NW (M)	**Acres:**	280.0

Location: HIGHWAY 49, ABOUT 4 MILES NW OF COLOMA.

Detailed Location:

Ecological:

General: COLLECTED ON 1 MAY 1953. NONE DETECTED DURING 2003 SURVEYS IN GREENWOOD CREEK AND SOUTH FORK AMERICAN RIVER. ACCORDING TO JENNINGS AND LIND, RANA BOYLII IS EXTIRPATED.

Owner/Manager: UNKNOWN

Occurrence No.	1908	**Map Index:**	A9320	**EO Index:**	111164	**Element Last Seen:**	2016-07-21
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2016-07-21
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2019-08-09

Quad Summary: Colfax (3912018)

County Summary: Placer

Lat/Long:	39.05665 / -120.90854	**Accuracy:**	80 meters
UTM:	Zone-10 N4325145 E680967	**Elevation (ft):**	954
PLSS:	T14N, R10E, Sec. 18, SW (M)	**Acres:**	5.0

Location: INDIAN CREEK NEAR ITS CONFLUENCE WITH NORTH FORK AMERICAN RIVER, AUBURN STATE RECREATION AREA, 4 MILES SE OF COLFAX.

Detailed Location:

Ecological:

General: 12 INDIVIDUALS FOUND AND TISSUE COLLECTED FOR GENETIC ANALYSIS ON 21 JUL 2016.

Owner/Manager: BLM

Occurrence No.	1948	**Map Index:**	A9499	**EO Index:**	111349	**Element Last Seen:**	2010-06-08
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2010-06-08
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2018-09-18

Quad Summary: Greenwood (3812088)

County Summary: Placer

Lat/Long:	38.96149 / -120.88487	**Accuracy:**	specific area
UTM:	Zone-10 N4314630 E683261	**Elevation (ft):**	950
PLSS:	T13N, R10E, Sec. 20, NW (M)	**Acres:**	9.0

Location: SLUG CANYON NEAR MIDDLE FORK AMERICAN RIVER CONFLUENCE, 5 MILES SW OF FORESTHILL, AUBURN STATE RECREATION AREA.

Detailed Location: MAPPED TO COORDINATES PROVIDED.

Ecological:

General: 5 FROGS FOUND ON 5 JUN 2005. 1 JUVENILE AND 5 ADULTS ON 6 JUN 2009. LARVAE AND 3 ADULTS ON 8 JUN 2010.

Owner/Manager: USBOR, BLM

Occurrence No.	1949	**Map Index:**	A9500	**EO Index:**	111350	**Element Last Seen:**	2009-07-27
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2009-07-27
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2018-09-21

Quad Summary: Colfax (3912018)
County Summary: Placer

Lat/Long:	39.11185 / -120.90874	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4331271 E680809	**Elevation (ft):**	1300
PLSS:	T15N, R10E, Sec. 31, NW (M)	**Acres:**	24.0

Location: NORTH FORK AMERICAN RIVER, 0.5 MILE SW OF SECRET RAVINE, 2.5 MILES EAST OF COLFAX.
Detailed Location:
Ecological:
General: 7 FROGS FOUND IN JUL 2005. 10 ADULTS, 5 JUVENILES, AND LARVAE FOUND IN JUL 2009.
Owner/Manager: BLM

Occurrence No.	1950	**Map Index:**	A9501	**EO Index:**	111351	**Element Last Seen:**	2009-07-27
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2009-07-27
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2018-09-21

Quad Summary: Colfax (3912018)
County Summary: Placer

Lat/Long:	39.11732 / -120.89674	**Accuracy:**	specific area
UTM:	Zone-10 N4331902 E681832	**Elevation (ft):**	1320
PLSS:	T15N, R10E, Sec. 30, S (M)	**Acres:**	26.0

Location: NORTH FORK AMERICAN RIVER JUST EAST OF SECRET RAVINE, 3 MILES EAST OF COLFAX.
Detailed Location:
Ecological:
General: 6 FROGS FOUND IN JUL 2005. 6 ADULTS, 1 JUVENILE, AND LARVAE FOUND IN JUL 2009.
Owner/Manager: BLM

Occurrence No.	1951	**Map Index:**	A9502	**EO Index:**	111352	**Element Last Seen:**	2005-07-27
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2005-07-27
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2018-05-22

Quad Summary: Colfax (3912018)
County Summary: Placer

Lat/Long:	39.09217 / -120.9236	**Accuracy:**	specific area
UTM:	Zone-10 N4329057 E679574	**Elevation (ft):**	1100
PLSS:	T14N, R09E, Sec. 1, SW (M)	**Acres:**	16.0

Location: NORTH FORK AMERICAN RIVER, 0.5 MILE SOUTH OF SLAUGHTER RAVINE, 1.5 MILES EAST OF COLFAX.
Detailed Location:
Ecological:
General: 2 FROGS FOUND ON 27 JUL 2005.
Owner/Manager: DPR-AUBURN SRA

Occurrence No.	2243	**Map Index:**	B0634	**EO Index:**	112502	**Element Last Seen:**	2006-10-07
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2006-10-07
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2018-09-19

Quad Summary: Greenwood (3812088)

County Summary: Placer

Lat/Long:	38.99457 / -120.94676	**Accuracy:**	80 meters
UTM:	Zone-10 N4318179 E677815	**Elevation (ft):**	791
PLSS:	T13N, R09E, Sec. 11, NW (M)	**Acres:**	5.0

Location: NORTH FORK AMERICAN RIVER, 0.5 MILE EAST OF CONFLUENCE WITH CODFISH CREEK, E OF APPLEGATE, AUBURN STATE RECREATION AREA.

Detailed Location: MAPPED TO COORDINATES PROVIDED.

Ecological:

General: 1 FROG PHOTOGRAPHED ON 7 OCT 2006.

Owner/Manager: DPR-AUBURN SRA

Occurrence No.	2256	**Map Index:**	B0720	**EO Index:**	112588	**Element Last Seen:**	19XX-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	19XX-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2018-09-17

Quad Summary: Colfax (3912018)

County Summary: Placer

Lat/Long:	39.1068 / -120.96027	**Accuracy:**	1/5 mile
UTM:	Zone-10 N4330609 E676366	**Elevation (ft):**	2462
PLSS:	T15N, R09E, Sec. 34, SW (M)	**Acres:**	70.0

Location: UNNAMED CREEK JUST WEST OF COLFAX HILL AND EAST OF BEN TAYLOR ROAD, COLFAX.

Detailed Location: GIVEN LOCATION: "DRAINAGE CREEK, 1/4 MI E COLFAX HIGH SCHOOL, COLFAX, CALIF, 2300 FT."

Ecological:

General: COLLECTED ON UNKNOWN DATE, SOME TIME BEFORE 1969.

Owner/Manager: UNKNOWN

Occurrence No.	2257	**Map Index:**	B0723	**EO Index:**	112591	**Element Last Seen:**	1850-XX-XX
Occ. Rank:	None			**Presence:**	Extirpated	**Site Last Seen:**	2003-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2018-09-18

Quad Summary: Garden Valley (3812077), Coloma (3812078)

County Summary: El Dorado

Lat/Long:	38.8016 / -120.89057	**Accuracy:**	1 mile
UTM:	Zone-10 N4296873 E683177	**Elevation (ft):**	747
PLSS:	T11N, R10E, Sec. 17 (M)	**Acres:**	1987.0

Location: SOUTH FORK AMERICAN RIVER, IN VICINITY OF COLOMA, MARSHALL GOLD DISCOVERY STATE HISTORIC PARK.

Detailed Location: TYPE LOCALITY FOR RANA BOYLII. DEV05R0002 SITES CB-15, CB-16A, CB-16B.

Ecological: TADPOLE SPECIMENS NOW LOST BUT ACCORDING TO JEN87A0001, THEY WERE MOST LIKELY RANA BOYLII. SITE OF 1848 GOLD DISCOVERY, RIVER WAS IMPACTED BY PROSPECTING AND MINING ACITIVITES. MODERATE TO HIGH RECREATIONAL USE.

General: 1 JUVENILE AND TADPOLES COLLECTED IN 1850. NONE DETECTED DURING 1998 HERP AND 2003 FYLF SURVEYS. ACCORDING TO JENNINGS, RANA BOYLII IS EXTIRPATED AT THIS SITE.

Owner/Manager: DPR, UNKNOWN

Occurrence No.	2528	**Map Index:**	B3450	**EO Index:**	115367	**Element Last Seen:**	2019-06-30
Occ. Rank:	Excellent			**Presence:**	Presumed Extant	**Site Last Seen:**	2019-06-30
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2019-07-16

Quad Summary:	Greenwood (3812088)
County Summary:	El Dorado

Lat/Long:	38.92237 / -120.93134	**Accuracy:**	80 meters
UTM:	Zone-10 N4310197 E679333	**Elevation (ft):**	1200
PLSS:	T12N, R09E, Sec. 1, NW (M)	**Acres:**	5.0

Location:	AMERICAN CANYON, ABOUT 0.7 MI S OF ITS CONFLUENCE WITH HOBOKEN CANYON, AUBURN STATE RECREATION AREA.
Detailed Location:	ALONG HIKING TRAIL AT CREEK CROSSING.
Ecological:	OPEN SPACE WITH RECREATIONAL USE. SITE DISTURBED BY HIKERS AND DOGS CROSSING CREEK.
General:	8 ADULTS OBSERVED ON 30 JUN 2019.
Owner/Manager:	DPR-AUBURN SRA

Occurrence No.	2529	**Map Index:**	B3452	**EO Index:**	115368	**Element Last Seen:**	2019-07-13
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2019-07-13
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2019-07-17

Quad Summary:	Colfax (3912018)
County Summary:	Placer

Lat/Long:	39.11056 / -120.93111	**Accuracy:**	80 meters
UTM:	Zone-10 N4331083 E678877	**Elevation (ft):**	2003
PLSS:	T15N, R09E, Sec. 35, NE (M)	**Acres:**	5.0

Location:	ROBBERS RAVINE, ALONG ITS INTERSECTION WITH STEVENS TRAIL, NEAR COLFAX.
Detailed Location:	MAPPED TO COORDINATES PROVIDED.
Ecological:	STEEP RAVINE WITH WATERFALLS AND PLUNGE POOLS. FROGS SEEN UPSTREAM AND DOWNSTREAM OF TRAIL IN POOLS AND ON ROCK FACE OF WATERFALLS. SURROUNDING AREA IS OPEN SPACE WITH RECREATIONAL USE (HIKING, RUNNING, DOG WALKING).
General:	3 ADULTS OBSERVED ON 13 JUL 2019.
Owner/Manager:	BLM

Occurrence No.	2530	**Map Index:**	B3454	**EO Index:**	115373	**Element Last Seen:**	2019-07-13
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2019-07-13
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2019-07-17

Quad Summary:	Colfax (3912018)
County Summary:	Placer

Lat/Long:	39.09892 / -120.93128	**Accuracy:**	80 meters
UTM:	Zone-10 N4329791 E678893	**Elevation (ft):**	1558
PLSS:	T14N, R09E, Sec. 2, NE (M)	**Acres:**	5.0

Location:	SLAUGHTER RAVINE, JUST WEST OF IOWA HILL RD BRIDGE AND SOUTH OF BURNT FLAT, EAST OF COLFAX.
Detailed Location:	MAPPED TO COORDINATES PROVIDED.
Ecological:	SMALL STREAM WITH RIPARIAN COVER RUNNING ALONG NORTH SIDE IOWA HILL RD DRAINING INTO N FORK AMERICAN RIVER. FROGS FOUND RESTING ON ROCKS AND AQUATIC VEGETATION AT SURFACE OF WATER. ROAD RECENTLY GRADED AND GRAVELLED.
General:	2 ADULTS OBSERVED ON 13 JUL 2019.
Owner/Manager:	PVT

Occurrence No.	2546	**Map Index:**	B3535	**EO Index:**	115455	**Element Last Seen:**	2019-07-20
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2019-07-20
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2019-07-23

Quad Summary:	Colfax (3912018)
County Summary:	Placer

Lat/Long:	39.06202 / -120.94304	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4325672 E677969	**Elevation (ft):**	1900
PLSS:	T14N, R09E, Sec. 14, SW (M)	**Acres:**	32.0

Location:	BUNCH CANYON, NW OF ITS CONFLUENCE WITH SMUTHERS RAVINE, ABOUT 3 MILES SOUTH OF COLFAX.
Detailed Location:	700 METER STRETCH OF CREEK ADJACENT TO YANKEE JIM RD, ABOUT 1 ROAD MILE SE OF ITS INTERSECTION WITH CANYON WAY.
Ecological:	SITE DISTURBED BY ADJACENT ROAD. FROGS FOUND RESTING ON ROCKS AND SWIMMING.
General:	9 ADULTS OBSERVED ON 20 JUL 2019.
Owner/Manager:	UNKNOWN

Occurrence No.	2561	**Map Index:**	B3599	**EO Index:**	115519	**Element Last Seen:**	2019-07-20
Occ. Rank:	Fair			**Presence:**	Presumed Extant	**Site Last Seen:**	2019-07-20
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2019-07-30

Quad Summary: Colfax (3912018)

County Summary: Placer

Lat/Long:	39.07709 / -120.99055	**Accuracy:**	80 meters
UTM:	Zone-10 N4327254 E673820	**Elevation (ft):**	1815
PLSS:	T14N, R09E, Sec. 8, SE (M)	**Acres:**	5.0

Location: TRIBUTARY TO BEAR RIVER, ON SOUTH SIDE OF PLUMTREE RD, 0.3 MI W OF ITS INTERSECTION WITH BUCK RIDGE COURT, SW OF COLFAX.

Detailed Location: MAPPED TO COORDINATES PROVIDED.

Ecological: FROG FOUND RESTING ON MOSS COVERED ROCK IN TINY FALLS OF SMALL CREEK UPSTREAM OF BEAR RIVER. POPULAR AREA FOR RECREATION. SITE DISTURBED BY SWIMMERS/DOGS AND DREDGE/GOLD MINING ALONG BEAR RIVER.

General: 1 ADULT OBSERVED ON 20 JUL 2019 WHILE SURVEYING ABOUT 200 METERS OF THE STREAM.

Owner/Manager: DFG-BEAR RIVER FA

Pandion haliaetus

Element Code: ABNKC01010

osprey

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G5
	State:	None		**State:**	S4
	Other:	CDF_S-Sensitive, CDFW_WL-Watch List, IUCN_LC-Least Concern			
Habitat:	**General:**	OCEAN SHORE, BAYS, FRESHWATER LAKES, AND LARGER STREAMS.			
	Micro:	LARGE NESTS BUILT IN TREE-TOPS WITHIN 15 MILES OF A GOOD FISH-PRODUCING BODY OF WATER.			

Occurrence No.	446	**Map Index:**	76581	**EO Index:**	77561	**Element Last Seen:**	2008-06-11
Occ. Rank:	Fair			**Presence:**	Presumed Extant	**Site Last Seen:**	2008-06-11
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2009-09-16

Quad Summary: Rocklin (3812172)

County Summary: Placer

Lat/Long:	38.85499 / -121.23054	**Accuracy:**	80 meters
UTM:	Zone-10 N4302173 E653537	**Elevation (ft):**	575
PLSS:	T12N, R07E, Sec. 30, SE (M)	**Acres:**	0.0

Location: NORTHWEST EDGE OF "TWELVE BRIDGES GOLF COURSE POND", EAST OF CATTA VERDERA COUNTRY CLUB, LINCOLN.

Detailed Location: NEST LOCATED ATOP WOODEN POLE. LOCATION MAPPED ACCORDING TO PROVIDED COORDINATES AND LOCATION SHOWN ON MAP.

Ecological: RESIDENTIAL BUILDOUT IS OCCURRING ALONG ADJACENT PARCELS.

General: NESTING PAIR OBSERVED ON 11 JUNE 2008.

Owner/Manager: PVT

Elanus leucurus **Element Code:** ABNKC06010

white-tailed kite

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G5
	State:	None		**State:**	S3S4
	Other:	BLM_S-Sensitive, CDFW_FP-Fully Protected, IUCN_LC-Least Concern			
Habitat:	**General:**	ROLLING FOOTHILLS AND VALLEY MARGINS WITH SCATTERED OAKS & RIVER BOTTOMLANDS OR MARSHES NEXT TO DECIDUOUS WOODLAND.			
	Micro:	OPEN GRASSLANDS, MEADOWS, OR MARSHES FOR FORAGING CLOSE TO ISOLATED, DENSE-TOPPED TREES FOR NESTING AND PERCHING.			

Occurrence No.	74	**Map Index:** 52426	**EO Index:** 52426	**Element Last Seen:**	2003-07-XX
Occ. Rank:	Good		**Presence:** Presumed Extant	**Site Last Seen:**	2003-07-XX
Occ. Type:	Natural/Native occurrence		**Trend:** Unknown	**Record Last Updated:**	2003-09-11

Quad Summary: Rocklin (3812172)

County Summary: Placer

Lat/Long:	38.85073 / -121.20688	**Accuracy:**	80 meters
UTM:	Zone-10 N4301740 E655600	**Elevation (ft):**	400
PLSS:	T12N, R07E, Sec. 33, NW (M)	**Acres:**	0.0

Location: TRAYLOR RANCH, BETWEEN DELMAR AVENUE AND COLWELL AVENUE, SOUTH OF LINCOLN WAY, 2 MILES WEST OF PENRYN.

Detailed Location:

Ecological: HABITAT CONSISTS OF OAK WOODLAND/RIPARIAN ASSOCIATED WITH ANTELOPE CREEK; DOMINATED BY BLUE OAKS. THIS 240-ACRE SITE IS SURROUNDED BY SMALLER (5-20 ACRE) RANCHETTES.

General: ADULT OBSERVED CARRYING A PREY ITEM TO THE HIDDEN NEST IN JUN 2003; 5 NEWLY-FLEDGED YOUNG OBSERVED IN EARLY JUL 2003 SITTING IN THE NEST TREE AND AN ADJACENT TREE, WATCHING ADULTS HUNTING AND OCCASIONALLY TAKING SHORT FLIGHTS WITH THEM.

Owner/Manager: SIERRA FOOTHILLS AUDUBON

Haliaeetus leucocephalus **Element Code:** ABNKC10010

bald eagle

Listing Status:	**Federal:**	Delisted	**CNDDB Element Ranks:**	**Global:**	G5
	State:	Endangered		**State:**	S3
	Other:	BLM_S-Sensitive, CDF_S-Sensitive, CDFW_FP-Fully Protected, IUCN_LC-Least Concern, USFS_S-Sensitive, USFWS_BCC-Birds of Conservation Concern			
Habitat:	**General:**	OCEAN SHORE, LAKE MARGINS, AND RIVERS FOR BOTH NESTING AND WINTERING. MOST NESTS WITHIN 1 MILE OF WATER.			
	Micro:	NESTS IN LARGE, OLD-GROWTH, OR DOMINANT LIVE TREE WITH OPEN BRANCHES, ESPECIALLY PONDEROSA PINE. ROOSTS COMMUNALLY IN WINTER.			

Occurrence No.	272	**Map Index:** 71321	**EO Index:**	72225	**Element Last Seen:** 2014-02-XX
Occ. Rank:	Good		**Presence:**	Presumed Extant	**Site Last Seen:** 2014-05-29
Occ. Type:	Natural/Native occurrence		**Trend:**	Stable	**Record Last Updated:** 2016-07-18

Quad Summary: Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.79240 / -121.10377	**Accuracy:**	80 meters
UTM:	Zone-10 N4295447 E664682	**Elevation (ft):**	475
PLSS:	T11N, R08E, Sec. 20, NE (M)	**Acres:**	0.0

Location: ANDERSON ISLAND NATURAL PRESERVE, NORTHERN ARM OF FOLSOM LAKE, ABOUT 0.8 MI SSE OF STERLING POINTE COURT, LOOMIS.

Detailed Location: NEST IN GRAY PINE IN MIDDLE OF NORTH SIDE OF ANDERSON ISLAND. ROOST SITES ON EAST SIDE OF LAKE AND ON 2 GRAY PINES ON SOUTH SIDE OF ISLAND.

Ecological: 1ST BALD EAGLE NEST RECORD AT FOLSOM LAKE. RECREATION LAKE SURROUNDED BY OAKS, GRAY PINES AND CALIF BUCKEYE. UNDERSTORY CONSISTED OF POISON OAK & ANNUAL GRASSES. SITE PREVIOUSLY USED BY EGRETS & HERONS. GREAT BLUE HERON ROOKERY IN VICINITY.

General: NEST ACTIVE IN 2005 & 2006. 2 FLEDGLINGS 20 JUN 2008. 1 FLEDGLING 24 JUN 2009. 2 EAGLETS / 2 ADULTS 12 APR 2010. ADULT IN NEST 1 APR 2011. ADULT IN NEST 4 MAY 2012. ADULT INCUBATING IN FEB 2013 & FEB 2014; UNKNOWN IF SUCCESSFUL IN 2014.

Owner/Manager: DPR-FOLSOM LAKE SRA, USBOR

Occurrence No.	359	**Map Index:** 95962	**EO Index:**	97112	**Element Last Seen:** 2015-04-XX
Occ. Rank:	Unknown		**Presence:**	Presumed Extant	**Site Last Seen:** 2015-04-XX
Occ. Type:	Natural/Native occurrence		**Trend:**	Unknown	**Record Last Updated:** 2015-04-22

Quad Summary: Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.75430 / -121.06343	**Accuracy:**	80 meters
UTM:	Zone-10 N4291293 E668275	**Elevation (ft):**	475
PLSS:	T11N, R08E, Sec. 34, SE (M)	**Acres:**	0.0

Location: ABOUT 0.6 MILE NNW OF SALMON FALLS ROAD AT EASY LANE, SOUTH FORK AMERICAN RIVER ARM OF FOLSOM LAKE, EL DORADO HILLS.

Detailed Location: SOUTH SIDE OF LAKE NEAR SHORE.

Ecological: NEST NEAR THE TOP OF A PONDEROSA PINE.

General: NEST FOUND IN APR 2015 WITH AT LEAST ONE CHICK, POSSIBLY 2; ADULTS OBSERVED IN THE AREA AND AT THE NEST.

Owner/Manager: USBOR

Falco peregrinus anatum

Element Code: ABNKD06071

American peregrine falcon

Listing Status:	**Federal:**	Delisted	**CNDDB Element Ranks:**	**Global:**	G4T4
	State:	Delisted		**State:**	S3S4
	Other:	CDF_S-Sensitive, CDFW_FP-Fully Protected, USFWS_BCC-Birds of Conservation Concern			
Habitat:	**General:**	NEAR WETLANDS, LAKES, RIVERS, OR OTHER WATER; ON CLIFFS, BANKS, DUNES, MOUNDS; ALSO, HUMAN-MADE STRUCTURES.			
	Micro:	NEST CONSISTS OF A SCRAPE OR A DEPRESSION OR LEDGE IN AN OPEN SITE.			

*** SENSITIVE ***

Occurrence No.	44	**Map Index:**	A0445	**EO Index:**	102007	**Element Last Seen:**	2015-03-19
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2015-03-19
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2016-06-10

Quad Summary: Auburn (3812181)

County Summary: El Dorado

Lat/Long:		**Accuracy:**	80 meters
UTM:		**Elevation (ft):**	1161
PLSS:		**Acres:**	5.0

Location: *SENSITIVE* LOCATION INFORMATION SUPPRESSED.

Detailed Location: PLEASE CONTACT THE CALIFORNIA NATURAL DIVERSITY DATABASE, CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE, FOR MORE INFORMATION: (916) 322-2493

Ecological: CLIFFS IN OLD LIMESTONE QUARRY NOW USED FOR RECREATION; ROCK CLIMBERS UNAWARE OF BIRDS WERE CLIMBING CLOSE TO EYRIE ON DATE SURVEYED. ACTIVE QUARRY OPERATIONS IMMEDIATELY SOUTH.

General:

Owner/Manager:

Laterallus jamaicensis coturniculus

Element Code: ABNME03041

California black rail

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G3G4T1
	State:	Threatened		**State:**	S1
	Other:	BLM_S-Sensitive, CDFW_FP-Fully Protected, IUCN_NT-Near Threatened, NABCI_RWL-Red Watch List, USFWS_BCC-Birds of Conservation Concern			
Habitat:	**General:**	INHABITS FRESHWATER MARSHES, WET MEADOWS AND SHALLOW MARGINS OF SALTWATER MARSHES BORDERING LARGER BAYS.			
	Micro:	NEEDS WATER DEPTHS OF ABOUT 1 INCH THAT DO NOT FLUCTUATE DURING THE YEAR AND DENSE VEGETATION FOR NESTING HABITAT.			

Occurrence No.	134	**Map Index:**	65182	**EO Index:**	65261	**Element Last Seen:**	2006-06-09
Occ. Rank:	Excellent			**Presence:**	Presumed Extant	**Site Last Seen:**	2006-06-09
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2009-10-08

Quad Summary: Rocklin (3812172)

County Summary: Placer

Lat/Long:	38.83449 / -121.22509	**Accuracy:**	1/10 mile
UTM:	Zone-10 N4299907 E654054	**Elevation (ft):**	360
PLSS:	T11N, R07E, Sec. 05, NW (M)	**Acres:**	0.0

Location: CLOVER CREEK, IN CLOVER VALLEY, ABOUT 2.2 MI EAST OF TELEGRAPH HILL, ABOUT 2 MILES NW OF LOOMIS.

Detailed Location: TEC: COORDS PROVIDED. RIC: GENERAL LOC PROVIDED VIA MAP (INDICATES SAME APPROX LOC, AND MAY REFER TO SAME DETECTION); OUTSIDE OF CORE STUDY AREA. MAPPED TO TEC LOCATION.

Ecological: LARGE, TYPHA-DOMINATED WETLAND SURROUNDING CLOVER CREEK; FIRM SUBSTRATE, UNSATURATED MUD WITH ALMOST NO STANDING WATER ELSEWHERE IN THE WETLAND. NO WATER FLOW WAS OBSEREVED, BUT INFLOW IS AT NORTH END.

General: 1 RAIL (PROBABLE TERRITORIAL MALE) RESPONDED TO TAPED CALL ON 9 JUN 2006; LIKELY THE DETECTION NOTED IN RIC08A. RECENT DETECTIONS IN N PLA CO & NEARBY INDICATE THIS AS IMPORTANT S EXTENSION OF THE PATCHY INLAND DISTRIBUTION OF THE CA BLRA.

Owner/Manager: PVT

Occurrence No.	173	**Map Index:**	70475	**EO Index:**	71368	**Element Last Seen:**	2006-06-16
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2006-06-16
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2009-09-24

Quad Summary: Wolf (3912112)

County Summary: Nevada

Lat/Long:	39.12231 / -121.24828	**Accuracy:**	80 meters
UTM:	Zone-10 N4331811 E651427	**Elevation (ft):**	686
PLSS:	T15N, R06E, Sec. 25, SE (M)	**Acres:**	0.0

Location: 0.5 MILE EAST OF THE INTERSECTION OF HATCHET CREEK ROAD AND SPENCEVILLE ROAD, SPENCEVILLE WILDLIFE AREA.

Detailed Location: SITE 256-05. WITHIN THE CORE SURVEY AREA.

Ecological: HABITAT CONSISTS OF A PALUSTRINE EMERGENT MARSH. SURVEY MARSHES WERE GENERALLY SMALL, GENTLY SLOPED, DENSELY VEGETATED & HIGHLY FRAGMENTED (SURROUNDED BY UNSUITABLE HABITAT). OCCURRENCE REPRESENTS A METAPOPULATION IN THE SIERRA FOOTHILLS.

General: AT LEAST 1 RAIL DETECTED VIA CALL-PLAYBACK ON 16 JUN 2006; SURVEYED 1 JUN - 31 AUG 2006. PART OF A YEAR-ROUND RESIDENT BREEDING POPULATION IN THE SIERRA FOOTHILLS, DISCONTINUOUS WITH THE SF BAY-DELTA POPULATION.

Owner/Manager: DFG-SPENCEVILLE WA

Occurrence No.	210	**Map Index:**	76058	**EO Index:**	77058	**Element Last Seen:**	2005-04-11
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2005-04-11
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2009-08-03

Quad Summary:	Gold Hill (3812182)
County Summary:	Placer

Lat/Long:	38.97373 / -121.21194	**Accuracy:**	80 meters
UTM:	Zone-10 N4315381 E654893	**Elevation (ft):**	480
PLSS:	T13N, R07E, Sec. 17, SE (M)	**Acres:**	0.0

Location:	VICINITY OF COON CREEK, ABOUT 1.9 MI EAST OF KILAGA SPRINGS & 2.9 MI WSW OF BIG HILL. SPEARS AND DIDION RANCH PARKS.
Detailed Location:	LOCATION DESCRIBED AS 200 M AT 265 DEGREES FROM WETLAND STATION #1, WITH COORDINATES PROVIDED FOR THE STATION. MAPPED TO A POINT ABOUT 200 M AT 265 DEGREES FROM THE STATION COORDINATES.
Ecological:	VALLEY-FOOTHILL RIPARIAN WETLAND HABITAT. VIRGINIA RAIL ALSO DETECTED FROM STATION #1.
General:	1 INDIVIDUAL DETECTED AT 8:55 AM ON 11 APR 2005 DURING A RAIL PLAYBACK SURVEY.
Owner/Manager:	PVT

Occurrence No.	267	**Map Index:**	76683	**EO Index:**	77629	**Element Last Seen:**	XXXX-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	XXXX-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2009-09-23

Quad Summary:	Wolf (3912112), Camp Far West (3912113)
County Summary:	Nevada

Lat/Long:	39.09217 / -121.24631	**Accuracy:**	2/5 mile
UTM:	Zone-10 N4328469 E651662	**Elevation (ft):**	670
PLSS:	T14N, R07E, Sec. 06, SW (M)	**Acres:**	0.0

Location:	ABOUT 2.2 MI NW OF BUSHY MOUNTAIN & 4.1 MI WSW OF BALD MOUNTAIN, E OF SPENCEVILLE WILDLIFE AREA. VICINITY OF NICHOLS RD.
Detailed Location:	MAPPED BY GEOREFERENCING FIGURE 2 IN RICHMOND 2008. WITHIN THE CORE SURVEY AREA.
Ecological:	SURVEY MARSHES GENERALLY SMALL, GENTLY SLOPED, DENSELY VEGETATED & HIGHLY FRAGMENTED (SURROUNDED BY UNSUITABLE HABITAT). WATER SOURCES PRIMARILY FROM IRRIGATION DITCHES. OCCURRENCE REPRESENTS PART OF A METAPOPULATION IN SIERRA FOOTHILLS.
General:	CA BLACK RAILS DETECTED BY RICHMOND ET AL AT 1 SITE DURING AT LEAST 1 PHASE OF CALL-PLAYBACK SURVEYS IN 1994-2006. PART OF A YEAR-ROUND RESIDENT BREEDING POPULATION IN THE SIERRA FOOTHILLS, DISCONTINUOUS WITH THE SF BAY-DELTA POPULATION.
Owner/Manager:	UNKNOWN

Occurrence No.	268	**Map Index:**	76684	**EO Index:**	77630	**Element Last Seen:**	XXXX-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	XXXX-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2009-09-23

Quad Summary:	Wolf (3912112), Camp Far West (3912113)
County Summary:	Nevada, Yuba

Lat/Long:	39.04606 / -121.26589	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4323319 E650066	**Elevation (ft):**	530
PLSS:	T14N, R06E, Sec. 23, SE (M)	**Acres:**	850.0

Location:	VICINITY OF PERIMETER RD ABOUT 0.5 TO 2.7 RD MI EAST OF MCCOURTNEY RD, EAST OF CAMP FAR WEST RESERVOIR.
Detailed Location:	MAPPED BY GEOREFERENCING FIGURE 2 IN RICHMOND 2008. WITHIN THE CORE SURVEY AREA.
Ecological:	SURVEY MARSHES GENERALLY SMALL, GENTLY SLOPED, DENSELY VEGETATED & HIGHLY FRAGMENTED (SURROUNDED BY UNSUITABLE HABITAT). WATER SOURCES PRIMARILY FROM IRRIGATION DITCHES. OCCURRENCE REPRESENTS PART OF A METAPOPULATION IN SIERRA FOOTHILLS.
General:	CA BLACK RAILS DETECTED BY RICHMOND ET AL AT 4 SITES DURING AT LEAST 1 PHASE OF CALL-PLAYBACK SURVEYS IN 1994-2006. PART OF A YEAR-ROUND RESIDENT BREEDING POPULATION IN THE SIERRA FOOTHILLS, DISCONTINUOUS WITH THE SF BAY-DELTA POPULATION.
Owner/Manager:	UNKNOWN

Occurrence No.	269	**Map Index:**	76685	**EO Index:**	77631	**Element Last Seen:**	XXXX-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	XXXX-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2009-09-23

Quad Summary:	Wolf (3912112)
County Summary:	Nevada

Lat/Long:	39.04418 / -121.21311	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4323199 E654638	**Elevation (ft):**	940
PLSS:	T14N, R07E, Sec. 20, SE (M)	**Acres:**	402.0

Location:	ABOUT 1.0 TO 1.9 MI SE OF ROCK MOUNTAIN & 5.0 TO 5.8 MI SSW OF BALD MOUNTAIN, EAST OF CAMP FAR WEST RESERVOIR.
Detailed Location:	MAPPED BY GEOREFERENCING FIGURE 2 IN RICHMOND 2008. WITHIN THE CORE SURVEY AREA.
Ecological:	SURVEY MARSHES GENERALLY SMALL, GENTLY SLOPED, DENSELY VEGETATED & HIGHLY FRAGMENTED (SURROUNDED BY UNSUITABLE HABITAT). WATER SOURCES PRIMARILY FROM IRRIGATION DITCHES. OCCURRENCE REPRESENTS PART OF A METAPOPULATION IN TSIERRA FOOTHILLS.
General:	CA BLACK RAILS DETECTED BY RICHMOND ET AL AT 2 SITES DURING AT LEAST 1 PHASE OF CALL-PLAYBACK SURVEYS IN 1994-2006. PART OF A YEAR-ROUND RESIDENT BREEDING POPULATION IN THE SIERRA FOOTHILLS, DISCONTINUOUS WITH THE SF BAY-DELTA POPULATION.
Owner/Manager:	UNKNOWN

Occurrence No.	270	**Map Index:**	76686	**EO Index:**	77632	**Element Last Seen:**	XXXX-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	XXXX-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2009-09-23

Quad Summary:	Wolf (3912112)
County Summary:	Nevada

Lat/Long:	39.05134 / -121.19831	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4324018 E655903	**Elevation (ft):**	1030
PLSS:	T14N, R07E, Sec. 21, E (M)	**Acres:**	985.0

Location:	VICINITY OF LITTLE WOLF CR & TRIBUTARY & RAB RAVINE, FROM JUNTION OF PERIMETER RD & GRIZZLY BEAR DR SOUTH ABOUT 2 MILES.
Detailed Location:	MAPPED BY GEOREFERENCING FIGURE 2 IN RICHMOND 2008. WITHIN THE CORE SURVEY AREA.
Ecological:	SURVEY MARSHES GENERALLY SMALL, GENTLY SLOPED, DENSELY VEGETATED & HIGHLY FRAGMENTED (SURROUNDED BY UNSUITABLE HABITAT). WATER SOURCES PRIMARILY FROM IRRIGATION DITCHES. OCCURRENCE REPRESENTS PART OF A METAPOPULATION IN SIERRA FOOTHILLS.
General:	CA BLACK RAILS DETECTED BY RICHMOND ET AL AT 6 SITES DURING AT LEAST 1 PHASE OF CALL-PLAYBACK SURVEYS IN 1994-2006. PART OF A YEAR-ROUND RESIDENT BREEDING POPULATION IN THE SIERRA FOOTHILLS, DISCONTINUOUS WITH THE SF BAY-DELTA POPULATION.
Owner/Manager:	UNKNOWN

Occurrence No.	271	**Map Index:**	76687	**EO Index:**	77633	**Element Last Seen:**	XXXX-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	XXXX-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2009-09-23

Quad Summary:	Wolf (3912112)
County Summary:	Nevada

Lat/Long:	39.07137 / -121.16351	**Accuracy:**	2/5 mile
UTM:	Zone-10 N4326301 E658870	**Elevation (ft):**	1400
PLSS:	T14N, R07E, Sec. 14, N (M)	**Acres:**	0.0

Location:	VICINITY OF CLAYTON RD BETWEEN RESTIVE WAY JUNTIONS, ABOUT 1.2 MI WEST OF PINE HILL.
Detailed Location:	MAPPED BY GEOREFERENCING FIGURE 2 IN RICHMOND 2008. WITHIN THE CORE SURVEY AREA.
Ecological:	SURVEY MARSHES GENERALLY SMALL, GENTLY SLOPED, DENSELY VEGETATED & HIGHLY FRAGMENTED (SURROUNDED BY UNSUITABLE HABITAT). WATER SOURCES PRIMARILY FROM IRRIGATION DITCHES. OCCURRENCE REPRESENTS PART OF A METAPOPULATION IN SIERRA FOOTHILLS.
General:	CA BLACK RAILS DETECTED BY RICHMOND ET AL AT 1 SITE DURING AT LEAST 1 PHASE OF CALL-PLAYBACK SURVEYS IN 1994-2006. PART OF A YEAR-ROUND RESIDENT BREEDING POPULATION IN THE SIERRA FOOTHILLS, DISCONTINUOUS WITH THE SF BAY-DELTA POPULATION.
Owner/Manager:	UNKNOWN

Progne subis

Element Code: ABPAU01010

purple martin

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G5
	State:	None		**State:**	S3
	Other:	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern			
Habitat:	**General:**	INHABITS WOODLANDS, LOW ELEVATION CONIFEROUS FOREST OF DOUGLAS-FIR, PONDEROSA PINE, AND MONTEREY PINE.			
	Micro:	NESTS IN OLD WOODPECKER CAVITIES MOSTLY; ALSO IN HUMAN-MADE STRUCTURES. NEST OFTEN LOCATED IN TALL, ISOLATED TREE/SNAG.			

Occurrence No.	27	**Map Index:** 70377	**EO Index:** 71268	**Element Last Seen:**	2007-05-23
Occ. Rank:	Good		**Presence:** Presumed Extant	**Site Last Seen:**	2007-05-23
Occ. Type:	Natural/Native occurrence		**Trend:** Unknown	**Record Last Updated:**	2007-10-31

Quad Summary: Rocklin (3812172), Roseville (3812173)

County Summary: Placer

Lat/Long:	38.77202 / -121.25187	**Accuracy:**	80 meters
UTM:	Zone-10 N4292929 E651863	**Elevation (ft):**	216
PLSS:	T11N, R06E, Sec. 25, SE (M)	**Acres:**	0.0

Location: HIGHWAY 65 OVERPASS OVER TAYLOR ROAD, ON THE SOUTH EDGE OF ROCKLIN.

Detailed Location:

Ecological: HABITAT SURROUNDING FREEWAYS CONSISTS OF NON-NATIVE GRASSLAND AND OAK WOODLAND.

General: 2 ADULTS (PAIR) OBSERVED NESTING IN OVERPASS DRAINAGE HOLE ON 23 MAY 2007.

Owner/Manager: CALTRANS, UNION PACIFIC ROW

Riparia riparia **Element Code:** ABPAU08010

bank swallow

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G5
	State:	Threatened		**State:**	S2
	Other:	BLM_S-Sensitive, IUCN_LC-Least Concern			
Habitat:	**General:**	COLONIAL NESTER; NESTS PRIMARILY IN RIPARIAN AND OTHER LOWLAND HABITATS WEST OF THE DESERT.			
	Micro:	REQUIRES VERTICAL BANKS/CLIFFS WITH FINE-TEXTURED/SANDY SOILS NEAR STREAMS, RIVERS, LAKES, OCEAN TO DIG NESTING HOLE.			

Occurrence No.	295	**Map Index:** 78087	**EO Index:** 85439	**Element Last Seen:**	1873-XX-XX
Occ. Rank:	Unknown		**Presence:** Presumed Extant	**Site Last Seen:**	1873-XX-XX
Occ. Type:	Natural/Native occurrence		**Trend:** Unknown	**Record Last Updated:**	2011-12-06

Quad Summary: Camino (3812066), Placerville (3812067), Shingle Springs (3812068), Slate Mtn. (3812076), Garden Valley (3812077), Coloma (3812078)

County Summary: El Dorado

Lat/Long:	38.72948 / -120.79835	**Accuracy:**	5 miles
UTM:	Zone-10 N4289058 E691378	**Elevation (ft):**	2000
PLSS:	T10N, R11E, Sec. 07 (M)	**Acres:**	0.0

Location: NEAR PLACERVILLE.

Detailed Location: LOCATION STATED AS "NEAR PLACERVILLE."

Ecological: COLONY NESTED IN THE "ROUGH FACE OF A HIGH GRAVELLY HILL, THAT HAD BEEN WASHED DOWN FOR YEARS BY THE PROCESS OF HYDRAULICING FOR GOLD."

General: AN ALBINO BANK SWALLOW OBSERVED SOMETIME DURING 1873.

Owner/Manager: UNKNOWN

Agelaius tricolor **Element Code:** ABPBXB0020

tricolored blackbird

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G2G3
	State:	Threatened		**State:**	S1S2
	Other:	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_EN-Endangered, NABCI_RWL-Red Watch List, USFWS_BCC-Birds of Conservation Concern			
Habitat:	**General:**	HIGHLY COLONIAL SPECIES, MOST NUMEROUS IN CENTRAL VALLEY & VICINITY. LARGELY ENDEMIC TO CALIFORNIA.			
	Micro:	REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, AND FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.			

Occurrence No.	102	**Map Index:**	12177	**EO Index:**	24726	**Element Last Seen:**	1971-05-31
Occ. Rank:	Fair			**Presence:**	Presumed Extant	**Site Last Seen:**	2014-04-18
Occ. Type:	Natural/Native occurrence			**Trend:**	Decreasing	**Record Last Updated:**	2016-10-05

Quad Summary: Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.7935 / -121.0188	**Accuracy:**	2/5 mile
UTM:	Zone-10 N4295726 E672061	**Elevation (ft):**	1099
PLSS:	T11N, R09E, Sec. 19, NW (M)	**Acres:**	280.0

Location: SALMON FALLS ROAD, 3.9 MI SOUTH OF PILOT HILL.

Detailed Location: MAPPED ACCORDING TO PROVIDED DIRECTIONS AND COORDINATES. LOCATION DESCRIBED AS "SALMON FALLS ROAD, 3.9 MILES SOUTH OF PILOT HILL." COLONY DATA STORED IN THE UC DAVIS TRICOLORED BLACKBIRD PORTAL; SITE NAME WAS "SALMON FALLS ROAD."

Ecological: HABITAT COMPOSED OF BLACKBERRIES.

General: A NESTING COLONY OF ABOUT 400 PAIRS OBSERVED ON 31 MAY 1971. 0 BIRDS OBSERVED ON 30 JUN 1992, 23 APR 2000, AND 18 APR 2014.

Owner/Manager: UNKNOWN

Occurrence No.	103	**Map Index:**	12562	**EO Index:**	24725	**Element Last Seen:**	19XX-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2011-04-17
Occ. Type:	Natural/Native occurrence			**Trend:**	Decreasing	**Record Last Updated:**	2016-10-05

Quad Summary: Garden Valley (3812077), Coloma (3812078)

County Summary: El Dorado

Lat/Long:	38.7643 / -120.8695	**Accuracy:**	3/5 mile
UTM:	Zone-10 N4292777 E685104	**Elevation (ft):**	1664
PLSS:	T11N, R10E, Sec. 33 (M)	**Acres:**	776.0

Location: ONE MILE EAST ON GOLD HILL ROAD, NEAR THE INTERSECTION OF HIGHWAY 49, GOLDHILL.

Detailed Location: HISTORIC LOCATION DESCRIBED AS "1 MI ON GOLD HILL RD NEAR INTERSECTION W/ HWY 49." 2000 LOCATION DESCRIBED AS "GOLD HILL ROAD, APPROX. 0.25 MI WEST OF HWY 49." COLONY DATA STORED IN THE UCD TRBL PORTAL; SITE NAME WAS "GOLD HILL ROAD."

Ecological: NESTING SUBSTRATE WAS CATTAILS. HABITAT APPEARS TO BE SUITABLE BASED ON AERIAL IMAGERY. SEVERAL PONDS IN THE AREA.

General: COLONY OF APPROXIMATELY 75 OBSERVED AT AN UNKNOWN DATE (M. SIPPSMEYER); PRESUMED NESTING. SITE CHECKED ON 30 JUN 1992; HABITAT STILL PRESENT, BUT NO BIRDS OBSERVED. 0 BIRDS OBSERVED ON 23 APR 2000 AND 17 APR 2011.

Owner/Manager: UNKNOWN

Oncorhynchus mykiss irideus pop. 11

Element Code: AFCHA0209K

steelhead - Central Valley DPS

Listing Status:	**Federal:**	Threatened	**CNDDB Element Ranks:**	**Global:**	G5T2Q
	State:	None		**State:**	S2
	Other:	AFS_TH-Threatened			
Habitat:	**General:**	POPULATIONS IN THE SACRAMENTO AND SAN JOAQUIN RIVERS AND THEIR TRIBUTARIES.			
	Micro:				

Occurrence No.	3	**Map Index:** 90973	**EO Index:** 92020	**Element Last Seen:**	2007-XX-XX
Occ. Rank:	Poor		**Presence:** Presumed Extant	**Site Last Seen:**	2007-XX-XX
Occ. Type:	Natural/Native occurrence		**Trend:** Decreasing	**Record Last Updated:**	2014-03-28

Quad Summary: Folsom (3812162), Citrus Heights (3812163), Rio Linda (3812164), Pilot Hill (3812171), Rocklin (3812172), Roseville (3812173)

County Summary: Placer, Sacramento

Lat/Long:	38.76061 / -121.25324	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4291660 E651767	**Elevation (ft):**	
PLSS:	T11N, R06E, Sec. 36 (M)	**Acres:**	4977.0

Location: DRY CREEK AND ITS TRIBUTARIES SECRET RAVINE AND MINERS RAVINE.

Detailed Location: MAPPED TO REACHES OF DRY CREEK & OCCUPIED TRIBUTARIES CURRENTLY NAVIGABLE BY STEELHEAD. COTTONWOOD DAM WAS TOTAL BARRIER ON MINERS PRIOR TO ITS FAILURE IN 2009. ALL SPAWNING REPORTS FROM U/S OF WASTEWATER TREATMENT PLANT (38.736, -121.316).

Ecological: MAINSTEM DRY CREEK (DC) USED AS MIGRATORY CORRIDOR, BUT WATER QUALITY & SUBSTRATE TOO DEGRADED TO SUPPORT SPAWNING. SPAWNING & REARING HABITAT UPSTREAM, IN SECRET (SR) & MINERS (MR) RAVINES.

General: 1998-2000: ESTIMATED RUN TO UPPER DC "A FEW 100"; JUVENILES CAUGHT AT MR/SR CONFLUENCE, PRESUMED PRESENT IN BOTH TRIBS. '04-05 ELECTROFISHING SURVEYS CAUGHT 136 O. MYKISS IN SR, 0 IN DC & MR. EVIDENCE OF SPAWNING OBS IN SR IN 2007.

Owner/Manager: UNKNOWN

Occurrence No.	4	**Map Index:** 90980	**EO Index:** 92029	**Element Last Seen:**	2007-XX-XX
Occ. Rank:	Unknown		**Presence:** Presumed Extant	**Site Last Seen:**	2007-XX-XX
Occ. Type:	Natural/Native occurrence		**Trend:** Unknown	**Record Last Updated:**	2013-12-03

Quad Summary: Roseville (3812173), Pleasant Grove (3812174), Verona (3812175), Gold Hill (3812182), Lincoln (3812183)

County Summary: Placer, Sutter

Lat/Long:	38.89835 / -121.25897	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4306937 E650978	**Elevation (ft):**	
PLSS:	T12N, R06E, Sec. 12 (M)	**Acres:**	2745.0

Location: AUBURN RAVINE UPSTREAM TO GOLD HILL DAM (=LOWER AUBURN RAVINE 1 DIVERSION DAM).

Detailed Location: MAPPED TO REACH OF STREAM CURRENTLY NAVIGABLE BY STEELHEAD (SH) PER CA FISH PASSAGE ASSESSMENT DATABASE. AS OF 2003, HEMPHILL DAM (38.897, -121.252) WAS THE U/S LIMIT TO MIGRATION. ANECDOTES OF RUNS IN 1930S AS FAR U/S AS WISE POWERHOUSE.

Ecological: SEASONAL, LOW-ELEV CK NOW YR-ROUND FROM TRANSFERS & NUISANCE FLOWS. SH POORLY DOCUMENTED. LIKELY SPAWNING & REARING AREA; SMALL FRY OBSERVED IN SPRING, JUVENILES YR-ROUND. 1/2-POUNDERS REPORTED. STOCKED W/OUT-OF-BASIN RAINBOW TROUT 1948-59.

General: 1992 SCALE ANALYSIS (N=1) & '95-96 SURVEYS INDICATED ANADROMY. JUVS CAUGHT IN '98-99 SURVEYS; INCL. APPARENT SMOLTS IN '98. JUVS & ADS 10-287 MM CAUGHT IN CDFW SURVEYS NOV-DEC 2004 & APR '05, ANADROMY PRESUMED. DETECTED 2007, PER CDFW DATA.

Owner/Manager: UNKNOWN

Corynorhinus townsendii

Element Code: AMACC08010

Townsend's big-eared bat

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G3G4

	State:	None	**State:**	S2
	Other:	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive, WBWG_H-High Priority		
Habitat:	**General:**	THROUGHOUT CALIFORNIA IN A WIDE VARIETY OF HABITATS. MOST COMMON IN MESIC SITES.		
	Micro:	ROOSTS IN THE OPEN, HANGING FROM WALLS AND CEILINGS. ROOSTING SITES LIMITING. EXTREMELY SENSITIVE TO HUMAN DISTURBANCE.		

Occurrence No.	30	**Map Index:** 92475	**EO Index:**	93612	**Element Last Seen:**	1913-08-11
Occ. Rank:	Unknown		**Presence:**	Presumed Extant	**Site Last Seen:**	1913-08-11
Occ. Type:	Natural/Native occurrence		**Trend:**	Unknown	**Record Last Updated:**	2014-05-21

Quad Summary:	Auburn (3812181)
County Summary:	Placer

Lat/Long:	38.89519 / -121.07239	**Accuracy:**	2/5 mile
UTM:	Zone-10 N4306912 E667167	**Elevation (ft):**	1300
PLSS:	T12N, R08E, Sec. 15 (M)	**Acres:**	0.0

Location:	PLACER HIGH SCHOOL. E OF COUNTY LINE AND W OF OPHIR.
Detailed Location:	EXACT LOCATION UNKNOWN. MAPPED GENERALLY TO THE PUBLIC SCHOOL BUILDING IN AUBURN, PLACER COUNTY IN FIELD NOTES.
Ecological:	
General:	6 SPECIMENS COLLECTED ON 31 JUL 1909 (MVZ #7752-7757). 16 SPECIMENS COLLECTED ON 6 AUG (MVZ #19212-19227) AND 1 SPECIMEN ON 11 AUG 1913 (MVZ #19228).
Owner/Manager:	UNKNOWN

Occurrence No.	35	**Map Index:** 92477	**EO Index:**	93616	**Element Last Seen:**	1950-09-01
Occ. Rank:	Unknown		**Presence:**	Presumed Extant	**Site Last Seen:**	1950-09-01
Occ. Type:	Natural/Native occurrence		**Trend:**	Unknown	**Record Last Updated:**	2014-05-21

Quad Summary:	Auburn (3812181)
County Summary:	El Dorado, Placer

Lat/Long:	38.90709 / -121.03348	**Accuracy:**	1 mile
UTM:	Zone-10 N4308304 E670513	**Elevation (ft):**	1210
PLSS:	T12N, R08E, Sec. 12 (M)	**Acres:**	0.0

Location:	IN THE VICINITY OF 2.5 MI ENE OF AUBURN AND S OF BOWMAN.
Detailed Location:	EXACT LOCATION UNKNOWN. MAPPED GENERALLY TO PROVIDED LOCALITY OF 2.5 MI ENE OF AUBURN.
Ecological:	
General:	2 SPECIMENS COLLECTED ON 1 SEP 1950 BY O. PEARSON (MVZ #114538, 114539).
Owner/Manager:	UNKNOWN

Occurrence No.	149	**Map Index:**	62603	**EO Index:**	62640	**Element Last Seen:**	2003-10-22
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2003-10-22
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2005-09-19

Quad Summary: Gold Hill (3812182)

County Summary: Placer

Lat/Long:	38.88144 / -121.17777	**Accuracy:**	80 meters
UTM:	Zone-10 N4305198 E658058	**Elevation (ft):**	725
PLSS:	T12N, R07E, Sec. 22, NE (M)	**Acres:**	0.0

Location: ABANDONED MINE IN THE HILLS BETWEEN DUTCH RAVINE AND BOULDER RIDGE, JUST WEST OF HWY 193.

Detailed Location:

Ecological: FOUND IN ABANDONED MINE WITH SEVERAL AUDITS. MINE WILL BE BAT GATED.

General: 6 INDIVIDUALS OBSERVED ROOSTING IN MINE ON 22 OCT 2003.

Owner/Manager: PVT

Antrozous pallidus

Element Code: AMACC10010

pallid bat

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G5
	State:	None		**State:**	S3
	Other:	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive, WBWG_H-High Priority			
Habitat:	**General:**	DESERTS, GRASSLANDS, SHRUBLANDS, WOODLANDS AND FORESTS. MOST COMMON IN OPEN, DRY HABITATS WITH ROCKY AREAS FOR ROOSTING.			
	Micro:	ROOSTS MUST PROTECT BATS FROM HIGH TEMPERATURES. VERY SENSITIVE TO DISTURBANCE OF ROOSTING SITES.			

Occurrence No.	430	**Map Index:**	A6482	**EO Index:**	108243	**Element Last Seen:**	2017-01-10
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2017-01-10
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2017-09-22

Quad Summary: Coloma (3812078)

County Summary: El Dorado

Lat/Long:	38.80865 / -120.90096	**Accuracy:**	80 meters
UTM:	Zone-10 N4297635 E682257	**Elevation (ft):**	726
PLSS:	T11N, R10E, Sec. 18, NE (M)	**Acres:**	5.0

Location: HIGHWAY 49 BRIDGE OVER THE SOUTH FORK AMERICAN RIVER, JUST WEST OF THE LOTUS RD JUNCTION IN COLOMA.

Detailed Location: MAPPED TO PROVIDED COORDINATES.

Ecological: KNOWN ROOST SITE FOR MULTIPLE BAT SPECIES UNDER BRIDGE. SURROUNDING AREA RIPARIAN, RURAL RESIDENTIAL. DISTURBANCE FROM HUMAN USE OF SPACE UNDER BRIDGE (TRASH).

General: DIAGNOSTIC SIGN (GUANO, PREY REMAINS) OBSERVED ON 10 JAN 2017. GUANO WAS NOT FRESH AND APPEARED TO INDICATE NIGHT ROOSTING IN PRIOR SEASON.

Owner/Manager: CALTRANS

Erethizon dorsatum **Element Code:** AMAFJ01010

North American porcupine

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G5
	State:	None		**State:**	S3
	Other:	IUCN_LC-Least Concern			
Habitat:	**General:**	FORESTED HABITATS IN THE SIERRA NEVADA, CASCADE, AND COAST RANGES, WITH SCATTERED OBSERVATIONS FROM FORESTED AREAS IN THE TRANSVERSE RANGES.			
	Micro:	WIDE VARIETY OF CONIFEROUS AND MIXED WOODLAND HABITAT.			

Occurrence No.	348 **Map Index:** A5759	**EO Index:**	107502	**Element Last Seen:**	1968-12-16
Occ. Rank:	Unknown	**Presence:**	Presumed Extant	**Site Last Seen:**	1968-12-16
Occ. Type:	Natural/Native occurrence	**Trend:**	Unknown	**Record Last Updated:**	2017-08-07

Quad Summary: Greenwood (3812088)

County Summary: El Dorado

Lat/Long:	38.89886 / -120.97682	**Accuracy:**	1 mile
UTM:	Zone-10 N4307499 E675448	**Elevation (ft):**	1696
PLSS:	T12N, R09E, Sec. 16 (M)	**Acres:**	1987.0

Location: ABOUT 5 MI E OF AUBURN, 7 MI W OF GEORGETOWN.

Detailed Location: MAPPED GENERALLY TO THE PROVIDED LOCATION DESCRIPTION OF "5 MI E AUBURN." EXACT LOCATION UNKNOWN. MEASURED 5 MILES EAST OF THE AUBURN POST OFFICE.

Ecological:

General: 1 MALE PORCUPINE COLLECTED (MVZ# 138988) ON 16 DEC 1968 BY D. MCCLAIN.

Owner/Manager: UNKNOWN

Pekania pennanti

Element Code: AMAJF01021

fisher - West Coast DPS

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G5T2T3Q
	State:	Threatened		**State:**	S2S3
	Other:	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, USFS_S-Sensitive			
Habitat:	**General:**	INTERMEDIATE TO LARGE-TREE STAGES OF CONIFEROUS FORESTS AND DECIDUOUS-RIPARIAN AREAS WITH HIGH PERCENT CANOPY CLOSURE.			
	Micro:	USES CAVITIES, SNAGS, LOGS AND ROCKY AREAS FOR COVER AND DENNING. NEEDS LARGE AREAS OF MATURE, DENSE FOREST.			

Occurrence No.	397	**Map Index:** 37957	**EO Index:** 32964	**Element Last Seen:**	1973-XX-XX
Occ. Rank:	Unknown		**Presence:** Presumed Extant	**Site Last Seen:**	1973-XX-XX
Occ. Type:	Natural/Native occurrence		**Trend:** Unknown	**Record Last Updated:**	1998-01-22

Quad Summary: Foresthill (3912017), Colfax (3912018), Dutch Flat (3912027), Chicago Park (3912028)

County Summary: Placer

Lat/Long:	39.11363 / -120.88231	**Accuracy:**	1 mile
UTM:	Zone-10 N4331521 E683089	**Elevation (ft):**	2400
PLSS:	T15N, R10E, Sec. 29 (M)	**Acres:**	0.0

Location: AMERICAN RIVER CANYON NEAR IOWA HILL.

Detailed Location:

Ecological:

General: MANY VISITS, ONE ADULT OBSERVED IN 1973.

Owner/Manager: BLM

Occurrence No.	700	**Map Index:** 78087	**EO Index:** 78967	**Element Last Seen:**	1916-07-XX
Occ. Rank:	Unknown		**Presence:** Presumed Extant	**Site Last Seen:**	1916-07-XX
Occ. Type:	Natural/Native occurrence		**Trend:** Unknown	**Record Last Updated:**	2010-02-08

Quad Summary: Camino (3812066), Placerville (3812067), Shingle Springs (3812068), Slate Mtn. (3812076), Garden Valley (3812077), Coloma (3812078)

County Summary: El Dorado

Lat/Long:	38.72948 / -120.79835	**Accuracy:**	5 miles
UTM:	Zone-10 N4289058 E691378	**Elevation (ft):**	2000
PLSS:	T10N, R11E, Sec. 07 (M)	**Acres:**	0.0

Location: NEAR PLACERVILLE.

Detailed Location:

Ecological:

General: FIVE FISHERS WERE KILLED FOR THEIR PELTS NEAR PLACERVILLE DURING JULY 1916.

Owner/Manager: UNKNOWN

Emys marmorata

Element Code: ARAAD02030

western pond turtle

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G3G4
	State:	None		**State:**	S3
	Other:	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_VU-Vulnerable, USFS_S-Sensitive			
Habitat:	**General:**	A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS AND IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION, BELOW 6000 FT ELEVATION.			
	Micro:				

NEEDS BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT UP TO 0.5 KM FROM WATER FOR EGG-LAYING.

Occurrence No.	1	**Map Index:**	22879	**EO Index:**	7838	**Element Last Seen:**	1993-02-12
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1993-02-12
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	1993-03-15

Quad Summary: Gold Hill (3812182)
County Summary: Placer

Lat/Long:	38.88899 / -121.21885	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4305965 E654479	**Elevation (ft):**	280
PLSS:	T12N, R07E, Sec. 17, SE (M)	**Acres:**	7.6

Location: JUST WEST OF FOWLER ROAD, 0.2 MILE NORTH OF HWY 193, 4 MILES WNW OF NEWCASTLE.
Detailed Location:
Ecological: HABITAT CONSISTS OF A 1-2 ACRE RESERVOIR, SURROUNDED BY OAK SAVANNAH, OAK WOODLAND, AND RIPARIAN.
General: ONE ADULT OBSERVED ON A ROCK NEAR THE MIDDLE OF THE RESERVOIR. POND TURTLES HAVE BEEN KNOWN FROM THIS SITE SINCE THE 1970'S.
Owner/Manager: UNKNOWN

Occurrence No.	444	**Map Index:**	32822	**EO Index:**	1134	**Element Last Seen:**	XXXX-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	XXXX-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	1996-01-17

Quad Summary: Garden Valley (3812077), Coloma (3812078)
County Summary: El Dorado

Lat/Long:	38.78172 / -120.84922	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4294751 E686820	**Elevation (ft):**	800
PLSS:	T11N, R10E, Sec. 22 (M)	**Acres:**	321.2

Location: NORTH OF PLACERVILLE ON SOUTH FORK AMERICAN RIVER, VICINITY OF COLOMA.
Detailed Location:
Ecological:
General: COLLECTION MADE BY G. FELLERS, DATE AND NUMBERS OF SPECIMENS UNKNOWN.
Owner/Manager: UNKNOWN

Occurrence No.	445	**Map Index:**	32823	**EO Index:**	1470	**Element Last Seen:**	1988-08-18
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1988-08-18
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	1996-01-17

Quad Summary: Greenwood (3812088)
County Summary: El Dorado

Lat/Long:	38.89450 / -120.92887	**Accuracy:**	1/5 mile
UTM:	Zone-10 N4307108 E679617	**Elevation (ft):**	1520
PLSS:	T12N, R09E, Sec. 13, NW (M)	**Acres:**	0.0

Location: ESE OF PENOBSCOT FARM; PENOBSCOT CREEK, 0.9 MILE SOUTH OF HIGHWAY 193.
Detailed Location:
Ecological:
General: 3 CAPTURED AND RETAINED BY D.C. HOLLAND ON 18 AUGUST 1988.
Owner/Manager: UNKNOWN

Occurrence No.	467	**Map Index:**	32843	**EO Index:**	9232	**Element Last Seen:**	1988-08-18
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1988-08-18
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	1996-02-23

Quad Summary:	Lake Combie (3912111)
County Summary:	Nevada

Lat/Long:	39.05732 / -121.09198	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4324870 E665091	**Elevation (ft):**	1260
PLSS:	T14N, R08E, Sec. 21 (M)	**Acres:**	93.0

Location:	WOLF CREEK ABOVE WOLF ROAD; NORTHWEST OF LAKE OF THE PINES.
Detailed Location:	
Ecological:	
General:	4 CAPTURED, 1 RELEASED AND 3 RETAINED BY D.C. HOLLAND ON 18 AUGUST 1988.
Owner/Manager:	UNKNOWN

Occurrence No.	608	**Map Index:**	56206	**EO Index:**	56222	**Element Last Seen:**	2004-05-08
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2004-05-08
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2004-07-26

Quad Summary:	Pilot Hill (3812171)
County Summary:	Placer

Lat/Long:	38.79413 / -121.10850	**Accuracy:**	80 meters
UTM:	Zone-10 N4295631 E664268	**Elevation (ft):**	475
PLSS:	T11N, R08E, Sec. 20, NE (M)	**Acres:**	0.0

Location:	1.5 MILES SE OF THE INTERSECTION OF HORSESHOE BAR ROAD AND AUBURN-FOLSOM ROAD, ON THE WEST EDGE OF FOLSOM LAKE.
Detailed Location:	
Ecological:	HABITAT CONSISTS OF A SMALL POND CREATED BY A STONE WALL BUILT ACROSS A SMALL RAVINE ON THE EDGE OF FOLSOM LAKE.
General:	1 JUVENILE OBSERVED ON 8 MAY 2004.
Owner/Manager:	DPR-FOLSOM LAKE SRA

*** SENSITIVE ***

Occurrence No.	1217	**Map Index:**	78643	**EO Index:**	79570	**Element Last Seen:**	2010-04-19
Occ. Rank:	Excellent			**Presence:**	Presumed Extant	**Site Last Seen:**	2010-04-19
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2010-04-29

Quad Summary: Gold Hill (3812182)

County Summary: Placer

Lat/Long:		**Accuracy:**	nonspecific area
UTM:		**Elevation (ft):**	270
PLSS:		**Acres:**	167.0

Location: *SENSITIVE* LOCATION INFORMATION SUPPRESSED.

Detailed Location: PLEASE CONTACT THE CALIFORNIA NATURAL DIVERSITY DATABASE, CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE, FOR MORE INFORMATION: (916) 322-2493

Ecological: HABITAT CONSISTS OF BLUE OAK WOODLAND WITH A NETWORK OF PONDS AND SEASONAL CREEKS.

General:

Owner/Manager:

Occurrence No.	1317	**Map Index:**	A2135	**EO Index:**	103730	**Element Last Seen:**	2016-05-22
Occ. Rank:	Excellent			**Presence:**	Presumed Extant	**Site Last Seen:**	2016-05-22
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2016-10-06

Quad Summary: Wolf (3912112)

County Summary: Nevada

Lat/Long:	39.11399 / -121.24751	**Accuracy:**	80 meters
UTM:	Zone-10 N4330888 E651512	**Elevation (ft):**	436
PLSS:	T15N, R06E, Sec. 36, NE (M)	**Acres:**	5.0

Location: N BANK OF DRY CREEK ABOUT 0.25 AIR MI WSW OF SHINGLE FALLS & 1.6 MI NE OF SPENCEVILLE RD AT NICHOLS RD, SPENCEVILLE WA.

Detailed Location: MAPPED TO PROVIDED COORDINATES.

Ecological: FOUND IN STRANDED PUDDLE IN BEDROCK-LINED SIDE CHANNEL A FEW METERS FROM THE PERENNIAL STREAM. AREA USED FOR RECREATIONAL FISHING AND SWIMMING.

General: 1 ADULT OBSERVED ON 22 MAY 2016.

Owner/Manager: DFG-SPENCEVILLE WA

Phrynosoma blainvillii

Element Code: ARACF12100

coast horned lizard

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G3G4
	State:	None		**State:**	S3S4
	Other:	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern			
Habitat:	**General:**	FREQUENTS A WIDE VARIETY OF HABITATS, MOST COMMON IN LOWLANDS ALONG SANDY WASHES WITH SCATTERED LOW BUSHES.			
	Micro:	OPEN AREAS FOR SUNNING, BUSHES FOR COVER, PATCHES OF LOOSE SOIL FOR BURIAL, AND ABUNDANT SUPPLY OF ANTS AND OTHER INSECTS.			

Occurrence No.	597	**Map Index:**	39881	**EO Index:**	34883	**Element Last Seen:**	1995-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1995-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	1998-10-01

Quad Summary: Colfax (3912018)
County Summary: Placer

Lat/Long:	39.09546 / -120.95587	**Accuracy:**	2/5 mile
UTM:	Zone-10 N4329359 E676774	**Elevation (ft):**	2400
PLSS:	T14N, R09E, Sec. 03 (M)	**Acres:**	0.0

Location: COLFAX, NEAR RAILROAD SWITCH STATION.
Detailed Location:
Ecological: OPEN SANDY AREAS. YELLOW PINE & BLACK OAK.
General: 3 COLLECTIONS MADE AT THIS LOCATION. FIELDWORK DONE IN THE TIME PERIOD OF 1974 TO 1995.
Owner/Manager: UNKNOWN

Occurrence No.	600	**Map Index:**	39884	**EO Index:**	34886	**Element Last Seen:**	1990-07-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1990-07-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	1998-10-01

Quad Summary: Colfax (3912018), Chicago Park (3912028)
County Summary: Placer

Lat/Long:	39.12367 / -120.95189	**Accuracy:**	2/5 mile
UTM:	Zone-10 N4332497 E677048	**Elevation (ft):**	2400
PLSS:	T15N, R09E, Sec. 27 (M)	**Acres:**	0.0

Location: 560 OLD GRASS VALLEY RD, 1.5 MILES NORTH OF COLFAX.
Detailed Location: WOODPILE OF RESIDENCE.
Ecological: GRAY PINE CHAPARRAL WITH SOME CEDARS.
General: 2 JUVENILES OBSERVED (~2.5 INCHES TOTAL LENGTH).
Owner/Manager: PVT

Northern Volcanic Mud Flow Vernal Pool

Element Code: CTT44132CA

Northern Volcanic Mud Flow Vernal Pool

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G1
	State:	None		**State:**	S1.1
	Other:				
Habitat:	**General:**	□			
	Micro:	□			

Occurrence No.	1	**Map Index:**	11782	**EO Index:**	16218	**Element Last Seen:**	1982-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1982-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	1998-07-16

Quad Summary:	Folsom (3812162), Citrus Heights (3812163), Rocklin (3812172), Roseville (3812173)
County Summary:	Placer

Lat/Long:	38.75189 / -121.25431	**Accuracy:**	specific area
UTM:	Zone-10 N4290690 E651693	**Elevation (ft):**	240
PLSS:	T10N, R07E, Sec. 06 (M)	**Acres:**	432.3

Location:	BETWEEN DOUGLAS BLVD & MINERS RAVINE JUST EAST OF ROSEVILLE.
Detailed Location:	
Ecological:	DIVERSITY OF POOL TAXA PRESENT INCLUDES DICHELOSTEMMA LACUNA-VERNALIS. MOST OF THIS LARGE AREA IS ON VOLCANIC SUBSTRATE. <50 ACRES IN THE NW PORTION OF THE BOUNDED AREA IS LOW TERRACE FORMATION W/HARDPAN VERNAL POOLS.
General:	UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO. SEE WWW.DFG.CA.GOV/BIOGEODATA/VEGCAMP/NATURAL_COMM_BACKGROUND.ASP TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.
Owner/Manager:	UNKNOWN

Occurrence No.	2	**Map Index:**	11828	**EO Index:**	16215	**Element Last Seen:**	1986-04-14
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1986-04-14
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	1998-07-16

Quad Summary:	Rocklin (3812172)
County Summary:	Placer

Lat/Long:	38.76550 / -121.22509	**Accuracy:**	specific area
UTM:	Zone-10 N4292250 E654204	**Elevation (ft):**	400
PLSS:	T11N, R07E, Sec. 32, NW (M)	**Acres:**	346.4

Location:	RIDGE BETWEEN MINERS RAVINE & SECRET RAVINE, VICINITY OF ROCKLIN-ROSEVILLE CORPORATE BOUNDARIES.
Detailed Location:	WESCO SURVEYED 70 AC W/IN ROSEVILLE CITY LIMITS BUT TOTAL POOL AREA MUCH LARGER (ALONG SIERRA COLLEGE BLVD).
Ecological:	POOLS ON VOLCANIC SUBSTRATE. MANY POOL TAXA PRESENT INCL DICHELOSTEMMA LACUNA-VERNALIS. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.
General:	SEE WWW.DFG.CA.GOV/BIOGEODATA/VEGCAMP/NATURAL_COMM_BACKGROUND.ASP TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.
Owner/Manager:	UNKNOWN

Occurrence No.	3	**Map Index:**	11798	**EO Index:**	13419	**Element Last Seen:**	1982-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1982-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	1998-07-16

Quad Summary:	Rocklin (3812172)
County Summary:	Placer

Lat/Long:	38.76842 / -121.24127	**Accuracy:**	specific area
UTM:	Zone-10 N4292547 E652791	**Elevation (ft):**	280
PLSS:	T11N, R07E, Sec. 30, S (M)	**Acres:**	141.8

Location:	NORTH & WEST OF ROSEVILLE RESERVOIR, SE OF SECRET RAVINE, ROSEVILLE-ROCKLIN CORPORATE BOUNDARY.
Detailed Location:	BOUNDARY INCL 2 POOL AREAS; ONE AREA HAS 48 ACRES OF POOLS (WESCO, 1982); THE OTHER AREA HAS 30 ACRES OF LOWER QUALITY POOLS.
Ecological:	ON VOLCANIC SUBSTRATE. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.
General:	SEE WWW.DFG.CA.GOV/BIOGEODATA/VEGCAMP/NATURAL_COMM_BACKGROUND.ASP TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.
Owner/Manager:	UNKNOWN

Branchinecta lynchi **Element Code:** ICBRA03030

vernal pool fairy shrimp

Listing Status:	**Federal:**	Threatened	**CNDDB Element Ranks:**	**Global:**	G3
	State:	None		**State:**	S3
	Other:	IUCN_VU-Vulnerable			
Habitat:	**General:**	ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.			
	Micro:	INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.			

Occurrence No.	229	**Map Index:**	42058	**EO Index:**	42058	**Element Last Seen:**	1998-12-22
Occ. Rank:	None			**Presence:**	Extirpated	**Site Last Seen:**	1998-12-22
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2014-08-18

Quad Summary: Rocklin (3812172)

County Summary: Placer

Lat/Long:	38.76584 / -121.23825	**Accuracy:**	80 meters
UTM:	Zone-10 N4292265 E653059	**Elevation (ft):**	320
PLSS:	T11N, R07E, Sec. 31, NW (M)	**Acres:**	0.0

Location: 0.2 MILE SW OF ROSEVILLE RES, 1.1 MILES S OF JCT TAYLOR RD & SUNSET BLVD, 2.2 MILES SW OF SIERRA COLLEGE, ROSEVILLE.

Detailed Location: OLYMPUS OAKS PROJECT SITE, AKT DEVELOPMENT.

Ecological: 1998: VERNAL POOL COMMUNITY. 2009 AERIAL PHOTOS SHOW THAT THE SITE HAS BEEN COMPLETELY DEVELOPED.

General: 4 COLLECTED ON 16 DEC 1998 (CASIZ #121244). HUNDREDS OBSERVED ON 22 DEC 1998.

Owner/Manager: PVT-AKT DEVELOPMENT

Occurrence No.	230	**Map Index:**	42059	**EO Index:**	42059	**Element Last Seen:**	1998-12-22
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	1998-12-22
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	1999-12-22

Quad Summary: Rocklin (3812172)

County Summary: Placer

Lat/Long:	38.76264 / -121.24694	**Accuracy:**	80 meters
UTM:	Zone-10 N4291896 E652311	**Elevation (ft):**	260
PLSS:	T11N, R07E, Sec. 31, NW (M)	**Acres:**	0.0

Location: 0.8 MILE SW OF ROSEVILLE RESERVOIR, 1.3 MI S OF JCT TAYLOR RD & SUNSET BLVD, 2.6 MILES SW OF SIERRA COLLEGE, ROSEVILLE.

Detailed Location: OLYMPUS OAKS PROJECT SITE, AKT DEVELOPMENT..

Ecological: VERNAL POOL COMMUNITY.

General: 100'S OBSERVED IN 1998.

Owner/Manager: PVT-AKT DEVELOPMENT

Linderiella occidentalis

Element Code: ICBRA06010

California linderiella

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G2G3
	State:	None		**State:**	S2S3
	Other:	IUCN_NT-Near Threatened			
Habitat:	**General:**	SEASONAL POOLS IN UNPLOWED GRASSLANDS WITH OLD ALLUVIAL SOILS UNDERLAIN BY HARDPAN OR IN SANDSTONE DEPRESSIONS.			
	Micro:	WATER IN THE POOLS HAS VERY LOW ALKALINITY, CONDUCTIVITY, AND TOTAL DISSOLVED SOLIDS.			

Occurrence No.	378	**Map Index:** 75254	**EO Index:**	76278	**Element Last Seen:** 2007-10-09
Occ. Rank:	Unknown		**Presence:**	Presumed Extant	**Site Last Seen:** 2007-10-09
Occ. Type:	Natural/Native occurrence		**Trend:**	Unknown	**Record Last Updated:** 2009-05-27

Quad Summary: Rocklin (3812172)

County Summary: Placer

Lat/Long:	38.77344 / -121.21016	**Accuracy:**	80 meters
UTM:	Zone-10 N4293157 E655483	**Elevation (ft):**	520
PLSS:	T11N, R07E, Sec. 28, W (M)	**Acres:**	0.0

Location: ALONG SIERRA COLLEGE BLVD; ABOUT 0.4 MI WSW OF SIERRA COLLEGE BLVD AT BOARDMAN CANAL, SE OF ROCKLIN.

Detailed Location: BASIN 16 MAPPED TO PROVIDED MARKING ON MAP.

Ecological:

General: 45 BASINS WERE IDENTIFIED AS POTENTIAL HABITAT AND SAMPLED BOTH DRY-SEASON AND WET-SEASON FOR BRANCHIPODS. 1 CYST WAS OBSERVED IN A SOIL SAMPLE COLLECTED DURING DRY-SEASON SAMPLING ON 9 OCT 2007 AT BASIN 16.

Owner/Manager: UNKNOWN

Desmocerus californicus dimorphus

Element Code: IICOL48011

valley elderberry longhorn beetle

Listing Status:	**Federal:**	Threatened	**CNDDB Element Ranks:**	**Global:**	G3T2
	State:	None		**State:**	S2
	Other:				
Habitat:	**General:**	OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA, IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA).			
	Micro:	PREFERS TO LAY EGGS IN ELDERBERRIES 2-8 INCHES IN DIAMETER; SOME PREFERENCE SHOWN FOR "STRESSED" ELDERBERRIES.			

Occurrence No.	82	**Map Index:**	33014	**EO Index:**	3784	**Element Last Seen:**	1991-06-11
Occ. Rank:	Poor			**Presence:**	Presumed Extant	**Site Last Seen:**	1991-06-11
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	1998-08-11

Quad Summary:	Pilot Hill (3812171)
County Summary:	El Dorado

Lat/Long:	38.77641 / -121.09388	**Accuracy:**	80 meters
UTM:	Zone-10 N4293690 E665579	**Elevation (ft):**	840
PLSS:	T11N, R08E, Sec. 28, NW (M)	**Acres:**	0.0

Location:	ANDERSON CREEK, TRIBUTARY TO NORTH FORK AMERICAN RIVER/FOLSOM LAKE, ALONG RATTLESNAKE BAR ROAD, SSW OF PILOT HILL.
Detailed Location:	REPORT ON: TAXONOMY; DISTRIBUTION; LIFE HISTORY; HABITAT; FIELD TECHNIQUES & OBSERVATIONS; BEETLE RECOVERY.
Ecological:	HABITAT CONSISTS OF ONE UNHEALTHY-LOOKING CLUMP (MORE DEAD THAN LIVE BRANCHES) OF ELDERBERRY, SURROUNDED BY OAK WOODLAND.
General:	MANY EXIT HOLES OBSERVED; SOME POSSIBLY RECENT.
Owner/Manager:	PVT

Occurrence No.	83	**Map Index:**	33015	**EO Index:**	3783	**Element Last Seen:**	1991-06-11
Occ. Rank:	Fair			**Presence:**	Presumed Extant	**Site Last Seen:**	1991-06-11
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	1998-08-11

Quad Summary:	Pilot Hill (3812171)
County Summary:	El Dorado

Lat/Long:	38.77044 / -121.09753	**Accuracy:**	80 meters
UTM:	Zone-10 N4293021 E665276	**Elevation (ft):**	760
PLSS:	T11N, R08E, Sec. 28, SW (M)	**Acres:**	0.0

Location:	NE SHORE OF FOLSOM LAKE, ALONG RATTLESNAKE BAR ROAD, JUST NORTH OF PENINSULA CAMPGROUND ENTRANCE, FOLSOM LAKE SRA.
Detailed Location:	LOCATED WITHIN THE STATE PARK, BUT LOCATED JUST OUTSIDE THE ENTRANCE GATE. REPORT ON: TAXONOMY; DISTRIBUTION; LIFE HISTORY; HABITAT; FIELD TECHNIQUES & OBSERVATIONS; BEETLE RECOVERY.
Ecological:	HABITAT CONSISTS OF 4 ELDERBERRY CLUMPS IN A WET DITCH ALONG THE ROADSIDE, SURROUNDED BY OAK WOODLAND.
General:	4 ELDERBERRY CLUMPS CONTAINED MANY OLD AND NEW EXIT HOLES. PLANTS HAD BEEN SEVERELY TRIMMED AND PRUNED, WITH EVEN MAJOR TRUNKS CUT OUT, ALTHOUGH NOT RECENTLY.
Owner/Manager:	DPR-FOLSOM LAKE SRA

Occurrence No.	84	**Map Index:**	33016	**EO Index:**	3788	**Element Last Seen:**	1991-04-25
Occ. Rank:	Poor			**Presence:**	Presumed Extant	**Site Last Seen:**	1991-04-25
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	1998-08-11

Quad Summary:	Rocklin (3812172)
County Summary:	Placer

Lat/Long:	38.79843 / -121.13298	**Accuracy:**	80 meters
UTM:	Zone-10 N4296064 E662132	**Elevation (ft):**	480
PLSS:	T11N, R08E, Sec. 18, SW (M)	**Acres:**	0.0

Location:	MINERS RAVINE, BRIDGE AT FOLSOM-AUBURN ROAD (TRIB TO DRY CREEK), 0.50 MILE SOUTH OF TUDSBURY ROAD, GRANITE BAY.
Detailed Location:	REPORT ON: TAXONOMY; DISTRIBUTION; LIFE HISTORY; HABITAT; FIELD TECHNIQUES & OBSERVATIONS; BEETLE RECOVERY.
Ecological:	HABITAT CONSISTS OF 2 LARGE ROADSIDE ELDERBERRY CLUMPS.
General:	2 RECENT EXIT HOLES OBSERVED ON 1 OF THE 2 CLUMPS.
Owner/Manager:	UNKNOWN

Occurrence No.	85	**Map Index:**	33017	**EO Index:**	3785	**Element Last Seen:**	1991-04-25
Occ. Rank:	Excellent			**Presence:**	Presumed Extant	**Site Last Seen:**	1991-04-25
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	1998-08-11

Quad Summary:	Rocklin (3812172)
County Summary:	Placer

Lat/Long:	38.77103 / -121.15473	**Accuracy:**	80 meters
UTM:	Zone-10 N4292985 E660304	**Elevation (ft):**	410
PLSS:	T11N, R07E, Sec. 25, SW (M)	**Acres:**	0.0

Location:	MINERS RAVINE, TRIB TO DRY CREEK, WEST SIDE OF AUBURN-FOLSOM ROAD, 0.25 MILE NE OF CAVITT/STALLMAN ROAD, GRANITE BAY.
Detailed Location:	REPORT ON: TAXONOMY; DISTRIBUTION; LIFE HISTORY; HABITAT; FIELD TECHNIQUES & OBSERVATIONS; BEETLE RECOVERY.
Ecological:	HABITAT CONSISTS OF OAK WOODLAND, WITH SCATTERED ELDERBERRIES AND LOTS OF POISON OAK; HILLY AND ROCKY SUBSTRATE.
General:	ELDERBERRIES WERE SCATTERED, BUT COMMON; ONLY 2 CLUMPS WERE FOUND WITH EXIT HOLES. MANY EXIT HOLES, 1 POSSIBLY RECENT. DEAD WOOD SAMPLE WITH A PROBABLE VELB TUNNEL COLLECTED.
Owner/Manager:	PVT

Occurrence No.	86	**Map Index:**	33018	**EO Index:**	3787	**Element Last Seen:**	1991-04-10
Occ. Rank:	Excellent			**Presence:**	Presumed Extant	**Site Last Seen:**	1991-04-10
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	1998-08-11

Quad Summary:	Rocklin (3812172)
County Summary:	Placer

Lat/Long:	38.79410 / -121.21122	**Accuracy:**	80 meters
UTM:	Zone-10 N4295448 E655347	**Elevation (ft):**	320
PLSS:	T11N, R07E, Sec. 20, NE (M)	**Acres:**	0.0

Location:	SECRET RAVINE, TRIBUTARY TO DRY CREEK, ALONG THE SIERRA COLLEGE NATURE TRAIL, ROCKLIN.
Detailed Location:	REPORT ON: TAXONOMY; DISTRIBUTION; LIFE HISTORY; HABITAT; FIELD TECHNIQUES & OBSERVATIONS; BEETLE RECOVERY.
Ecological:	HABITAT CONSISTS OF OAK WOODLAND, WITH SPARSE/SCATTERED ELDERBERRIES GROWING WITH OAKS, BUCKEYES, AND POISON OAK.
General:	ALTHOUGH THE ELDERBERRIES WERE FEW AND WIDELY-SCATTERED, MOST HAD OLD, CLEAN-CUT EXIT HOLES.
Owner/Manager:	LOS RIOS COMM COLLEGE DIST

Occurrence No.	137	**Map Index:**	39384	**EO Index:**	34386	**Element Last Seen:**	2006-04-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2006-04-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2015-03-11

Quad Summary:	Pilot Hill (3812171)
County Summary:	Placer

Lat/Long:	38.80228 / -121.11592	**Accuracy:**	1/5 mile
UTM:	Zone-10 N4296522 E663605	**Elevation (ft):**	640
PLSS:	T11N, R08E, Sec. 17, SW (M)	**Acres:**	0.0

Location:	VICINITY OF LAKE FOREST DR & LOMIDA LN INTERSECTION, ABOUT 0.8 MI E OF AUBURN-FOLSOM RD, 4.4 MI ESE OF LOOMIS PO.
Detailed Location:	IMPACTED SHRUBS WERE TRANSPLANTED TO LOT 1 (1.84 ACRE) MITIGATION AREA IN FEB 1993. STERLING POINTE SUBDIVISION LOCATED AT "END OF LOMIDA LANE, OFF AUBURN-FOLSOM RD." MAPPED TO PROVIDED MAP FOR LOCATION OF LOT 1 MITIGATION AREA.
Ecological:	ELDERBERRY WITH LIVE OAK. 305 ELDERBERRY SEEDLINGS AND 122 NATIVE TREE SEEDLINGS PLANTED IN 1994 TO INSURE A SURVIVAL RATE OF 80% AT THE END OF 10 YEARS. SITE WAS REASSESSED IN 2005-2006 AS PART OF A MITIGATION SUCCESS STUDY.
General:	4 EMERGENCE HOLES (EH) OBSERVED 1993; LARVAE DETECTED IN SECTIONED BRANCH. 3 EH OBS IN 1994. 2 EH IN 1995. 2 EH IN 1996. 1 EH IN 1997. 3 EH IN 1999. 2 EH OBS ON SAME ELDERBERRY IN BOTH 2001 & 2002. VELB REPORTED AS "PRESENT" IN 2005 & 2006.
Owner/Manager:	UNKNOWN

Occurrence No.	229	**Map Index:**	94736	**EO Index:**	95847	**Element Last Seen:**	2010-02-10
Occ. Rank:	Fair			**Presence:**	Presumed Extant	**Site Last Seen:**	2010-02-10
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2014-12-18

Quad Summary:	Colfax (3912018)
County Summary:	Placer

Lat/Long:	39.01439 / -120.99499	**Accuracy:**	80 meters
UTM:	Zone-10 N4320286 E673589	**Elevation (ft):**	1870
PLSS:	T14N, R09E, Sec. 32, SE (M)	**Acres:**	0.0

Location:	BEAR RIVER CANAL, ~0.5 MI E OF PLACER HILLS RD & CROTHER RD INTERSECTION, 1 MI NW OF HOTCHKISS HILL, SW OF HEATHER GLEN.
Detailed Location:	MAPPED TO PROVIDED COORDINATES. PLANTS LOCATED ON THE "EAST SIDE OF BEAR RIVER CANAL."
Ecological:	PLANTS INTERSPERSED WITH HIMALAYAN BLACKBERRY AND SWEET PEA, WHICH WERE THE PREDOMINANT PLANTS IN THE AREA. BROWN, CLAY SOILS.
General:	10 "BOREHOLES" FOUND ON A "GROUP OF PLANTS" ON 10 FEB 2010. BOREHOLES SCATTERED AMONGST LIVING AND DEAD STEMS. OBSERVER NOTED THAT HOLES WERE "NOT SEEN IN APRIL SURVEY, SO POSSIBLY NEW." BOREHOLES WERE PRESUMABLY NOT SEEN APR 2009.
Owner/Manager:	PVT

Occurrence No.	232	**Map Index:**	94741	**EO Index:**	95858	**Element Last Seen:**	2010-02-10
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2010-02-10
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2014-12-18

Quad Summary:	Colfax (3912018), Lake Combie (3912111)
County Summary:	Placer

Lat/Long:	39.01849 / -121.00139	**Accuracy:**	80 meters
UTM:	Zone-10 N4320729 E673024	**Elevation (ft):**	1785
PLSS:	T14N, R09E, Sec. 32, SW (M)	**Acres:**	0.0

Location:	ABOUT 0.3 MI NNE OF PLACER HILLS RD & CROTHER RD INTERSECTION, 1.5 MILES NW OF HOTCHKISS HILL, E OF CROMBIE LAKE.
Detailed Location:	MAPPED TO PROVIDED COORDINATES. PROVIDED LOCATION DESCRIPTION WAS "SOUTH SIDE OF COUNTRY ROAD, JUST EAST OF A BRIDGE OVER A SMALL CREEK."
Ecological:	EXIT HOLES FOUND ON A LARGE ELDERBERRY (MAIN STEM >5 INCHES) IN A HIMALAYAN BLACKBERRY PATCH ALONG THE SIDE OF COUNTRY ROAD. ELDERBERRY PREDOMINANTLY SURROUNDED BY ANNUAL GRASSLAND WITH LITTLE RIPARIAN AND OAK WOODLAND.
General:	3 EXIT HOLES (NO VELB) FOUND ON 20 FEB 2010.
Owner/Manager:	PVT

Occurrence No.	233	**Map Index:**	94742	**EO Index:**	95859	**Element Last Seen:**	2010-03-10
Occ. Rank:	Fair			**Presence:**	Presumed Extant	**Site Last Seen:**	2010-03-10
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2014-12-18

Quad Summary:	Lake Combie (3912111)
County Summary:	Placer

Lat/Long:	39.00069 / -121.00778	**Accuracy:**	80 meters
UTM:	Zone-10 N4318741 E672514	**Elevation (ft):**	1875
PLSS:	T13N, R09E, Sec. 06, SE (M)	**Acres:**	0.0

Location:	N SIDE OF SHIMP RD, ABOUT 0.3 MILE NE OF INTERSECTION WITH RED BUD LN, HALF WAY BETWEEN MEADOW VISTA & APPLEGATE.
Detailed Location:	MAPPED TO PROVIDED COORDINATES. PROVIDED LOCATION DESCRIPTION WAS "ALONG PG&E'S BEAR RIVER CANAL."
Ecological:	LARGE ELDERBERRY LOCATED ALONG BEAR RIVER CANAL IN A RIPARIAN AREA. MIXED THICKET OF WILLOWS AND BLACKBERRY ALONG THE EDGE OF A CLEARED PATH ON THE CANAL. INDETERMINATE SOILS. SURROUNDING LAND USE INCLUDED HIKING TRAIL AND PRIVATE LANDS.
General:	14 EXIT HOLES (NO VELB) FOUND ON 10 MAR 2010.
Owner/Manager:	PVT

Occurrence No.	269	**Map Index:**	95156	**EO Index:**	96291	**Element Last Seen:**	2013-05-29
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2013-05-29
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2015-03-09

Quad Summary:	Rocklin (3812172)
County Summary:	Placer

Lat/Long:	38.85913 / -121.20811	**Accuracy:**	specific area
UTM:	Zone-10 N4302670 E655474	**Elevation (ft):**	575
PLSS:	T12N, R07E, Sec. 28, SW (M)	**Acres:**	25.0

Location:	JUST E OF NELHI LANE, ABOUT 0.4 MILE N OF ENGLISH COLONY RD & DELMAR AVE INTERSECTION, 2.2 MILES WNW OF PENRYN PO.
Detailed Location:	MAPPED TO LOCATIONS OF SHRUBS WITH EXIT HOLES BASED ON PROVIDED PROJECT MAP. PROVIDED LOCATION DESCRIPTION FOR GENERAL AREA WAS "EAST OF ENGLISH COLONY RD, SOUTH OF NEHI LANE."
Ecological:	ELDERBERRY SHRUBS WERE IN REMNANT ORCHARD VEGETATION WITHIN CALIFORNIA ANNUAL GRASSLAND, OFTEN AMONG SALIX EXIGUA. SOILS ARE ANGREGG SERIES, DERIVED FROM WEATHERED METAMORPHIC ROCK. SHRUBS WERE FOUND ON SOUTHERLY SLOPES, 8-15%
General:	6 OUT OF 46 ELDERBERRY SHRUBS OBSERVED WITH EXIT HOLES ON 29 MAY 2013.
Owner/Manager:	PVT

Occurrence No.	270	**Map Index:**	95167	**EO Index:**	96300	**Element Last Seen:**	2001-04-XX
Occ. Rank:	None			**Presence:**	Possibly Extirpated	**Site Last Seen:**	2011-06-22
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2015-03-11

Quad Summary:	Rocklin (3812172)
County Summary:	Placer

Lat/Long:	38.77232 / -121.22698	**Accuracy:**	specific area
UTM:	Zone-10 N4293004 E654025	**Elevation (ft):**	330
PLSS:	T11N, R07E, Sec. 29 (M)	**Acres:**	236.0

Location:	VICINITY OF BOARDMAN CANAL, BETWEEN I-80 AND SIERRA COLLEGE BLVD, N OF SECRET RAVINE PKWY, 1 MILE SE OF ROCKLIN PO.
Detailed Location:	MAPPED TO PROVIDED PROJECT BOUNDARY FOR THE HIGHLANDS. 10 YEAR MONITORING CONDUCTED BY ECORP CONSULTING INC. MONITORING BEGAN IN 2002. CNDDB DID NOT HAVE RECORDS FOR 2002-2004 & 2009. VELB CONSERVATION AREA ALONG N MOST END OF SITE.
Ecological:	OAK WOODLAND AND SAVANNAH, VERNAL POOLS, AND SEASONAL WETLANDS ARE INTERSPERSED WITHIN THE GREATER GRASSLAND AREA. ASSOCIATED SPECIES INCLUDED CALIFORNIA BUCKEYE, TOYON, COYOTE BRUSH, BUCK BRUSH, GRAY PINE, BLUE OAK, AND VALLEY OAK.
General:	5 VALLEY ELDERBERRY LONGHORN BEETLE EXIT HOLES OBSERVED IN APR 2001. NO EVIDENCE OF VELB OCCUPANCY DETECTED IN 2005-2011. ELDERBERRY SHRUBS TRANSPLANTED TO CONSERVATION AREA AT NORTHERN PORTION OF SITE.
Owner/Manager:	PVT

Occurrence No.	302	**Map Index:**	95490	**EO Index:**	96625	**Element Last Seen:**	2006-09-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2006-09-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2015-03-16

Quad Summary:	Pilot Hill (3812171), Rocklin (3812172)
County Summary:	Placer

Lat/Long:	38.76419 / -121.13509	**Accuracy:**	3/5 mile
UTM:	Zone-10 N4292261 E662026	**Elevation (ft):**	500
PLSS:	T11N, R08E, Sec. 31 (M)	**Acres:**	0.0

Location:	ABOUT 1.5 MI E OF CAVITT STALLMAN RD & AUBURN FOLSOM RD, DOTONS POINT, N END OF FOLSOM LAKE, GRANITE BAY.
Detailed Location:	MAPPED GENERALLY TO PROVIDED LOCATION DESCRIPTION OF "FOLSOM LAKE SRA, NEAR DOTONS POINT." SITE WAS A "NATURAL SITE" ACCORDING TO STUDY.
Ecological:	
General:	VALLEY ELDERBERRY LONGHORN BEETLES REPORTED AS "PRESENT" DURING APR-SEP 2006 SURVEYS. SURVEYS CONDUCTED BY M. HOLYOAK & M. KOCH-MUNZ AS PART OF STUDY EVALUATING THE EFFECTS OF SITE CONDITIONS ON THE SUCCESS OF VELB.
Owner/Manager:	DPR-FOLSOM LAKE SRA, USBOR

Bombus occidentalis **Element Code:** IIHYM24250

western bumble bee

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G2G3
	State:	Candidate Endangered		**State:**	S1
	Other:	USFS_S-Sensitive, XERCES_IM-Imperiled			
Habitat:	**General:**	ONCE COMMON & WIDESPREAD, SPECIES HAS DECLINED PRECIPITOUSLY FROM CENTRAL CA TO SOUTHERN B.C., PERHAPS FROM DISEASE.			
	Micro:				

Occurrence No.	147	**Map Index:**	98419	**EO Index:**	99844	**Element Last Seen:**	1951-07-28
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1951-07-28
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2015-12-07

Quad Summary: Colfax (3912018)

County Summary: Placer

Lat/Long:	39.09633 / -120.91300	**Accuracy:**	1 mile
UTM:	Zone-10 N4329540 E680479	**Elevation (ft):**	2500
PLSS:	T14N, R09E, Sec. 01 (M)	**Acres:**	0.0

Location: 5 MILES EAST OF COLFAX.

Detailed Location: EXACT LOCATION UNKNOWN. MAPPED BY CNDDB 5 ROAD MILES EAST OF COLFAX, EAST OF THE NORTH FORK AMERICAN RIVER.

Ecological:

General: COLLECTED 28 JUL 1951.

Owner/Manager: UNKNOWN

Occurrence No.	149	**Map Index:**	98420	**EO Index:**	99847	**Element Last Seen:**	1976-05-17
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1976-05-17
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2015-12-07

Quad Summary: Coloma (3812078), Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.83489 / -121.01438	**Accuracy:**	1 mile
UTM:	Zone-10 N4300328 E672344	**Elevation (ft):**	1200
PLSS:	T11N, R09E, Sec. 06 (M)	**Acres:**	0.0

Location: PILOT HILL.

Detailed Location: EXACT LOCATION UNKNOWN. MAPPED BY CNDDB AT THE COMMUNITY OF PILOT HILL, SW OF AUBURN.

Ecological:

General: COLLECTED 17 MAY 1976.

Owner/Manager: UNKNOWN

Bombus caliginosus

Element Code: IIHYM24380

obscure bumble bee

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G4?
	State:	None		**State:**	S1S2
	Other:	IUCN_VU-Vulnerable			
Habitat:	**General:**	COASTAL AREAS FROM SANTA BARABARA COUNTY TO NORTH TO WASHINGTON STATE.			
	Micro:	FOOD PLANT GENERA INCLUDE BACCHARIS, CIRSIUM, LUPINUS, LOTUS, GRINDELIA AND PHACELIA.			

Occurrence No.	48	**Map Index:** 96213	**EO Index:** 97376	**Element Last Seen:**	1949-06-01
Occ. Rank:	Unknown		**Presence:** Presumed Extant	**Site Last Seen:**	1949-06-01
Occ. Type:	Natural/Native occurrence		**Trend:** Unknown	**Record Last Updated:**	2015-05-27

Quad Summary: Colfax (3912018)

County Summary: Placer

Lat/Long:	39.10072 / -120.95326	**Accuracy:**	1 mile
UTM:	Zone-10 N4329948 E676986	**Elevation (ft):**	2450
PLSS:	T14N, R09E, Sec. 03 (M)	**Acres:**	0.0

Location: COLFAX.

Detailed Location: EXACT LOCATION UNKNOWN. MAPPED BY CNDDB CENTERED ON COLFAX.

Ecological:

General: 5 COLLECTED BY CRICKMER 1 JUN 1949.

Owner/Manager: BLM, COLFAX CITY

Bombus morrisoni

Element Code: IIHYM24460

Morrison bumble bee

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G4G5
	State:	None		**State:**	S1S2
	Other:	IUCN_VU-Vulnerable			
Habitat:	**General:**	FROM THE SIERRA-CASCADE RANGES EASTWARD ACROSS THE INTERMOUNTAIN WEST.			
	Micro:	FOOD PLANT GENERA INCLUDE CIRSIUM, CLEOME, HELIANTHUS, LUPINUS, CHRYSOTHAMNUS, AND MELILOTUS.			

Occurrence No.	19	**Map Index:** 59351	**EO Index:** 98256	**Element Last Seen:**	1965-09-18
Occ. Rank:	Unknown		**Presence:** Presumed Extant	**Site Last Seen:**	1965-09-18
Occ. Type:	Natural/Native occurrence		**Trend:** Unknown	**Record Last Updated:**	2015-07-28

Quad Summary: Auburn (3812181)

County Summary: El Dorado, Placer

Lat/Long:	38.90211 / -121.07070	**Accuracy:**	1 mile
UTM:	Zone-10 N4307683 E667297	**Elevation (ft):**	1300
PLSS:	T12N, R08E, Sec. 10 (M)	**Acres:**	0.0

Location: AUBURN.

Detailed Location: EXACT LOCATION UNKNOWN. MAPPED BY CNDDB IN GENERAL VICINITY OF AUBURN.

Ecological:

General: COLLECTED 18 SEPT 1965.

Owner/Manager: UNKNOWN

Andrena subapasta

Element Code: IIHYM35210

An andrenid bee

Listing Status: **Federal:** None
State: None
Other:

CNDDB Element Ranks: **Global:** G1G2
State: S1S2

Habitat: **General:** COLLECTS POLLEN PRIMARILY FROM ARENARIA CALIFORNICA BUT ALSO ORTHOCARPUS ERIANTHUS & LASTHENIA SPP.
Micro:

Occurrence No.	1	**Map Index:**	59350	**EO Index:**	59386	**Element Last Seen:**	1964-03-29
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1964-03-29
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2005-03-21

Quad Summary: Auburn (3812181)
County Summary: El Dorado

Lat/Long:	38.88714 / -121.01592	**Accuracy:**	1/5 mile
UTM:	Zone-10 N4306123 E672084	**Elevation (ft):**	1525
PLSS:	T12N, R09E, Sec. 18 (M)	**Acres:**	0.0

Location: COOL.
Detailed Location:
Ecological: FEMALES OF THIS SPECIES COLLECT POLLEN PRIMARILY FROM ARENARIA, BUT ALSO ORTHOCARPUS ERIANTHUS AND LASTHENIA SP.
General: HOLOTYPE FEMALE AND ALLOTYPE MALE (SAME LOCALITY BUT COLLECTED 21 MAR 1962) TAKEN AT FLOWERS OF ARENARIA CALIFORNICA & DEPOSITED AT CAS. 2 ADDITIONAL MALES FROM THE SAME LOCALITY 21 MAR 1942 AND 4 APR 1964 ARE DEPOSITED AT UCB AND RWT.
Owner/Manager: UNKNOWN

Occurrence No.	2	**Map Index:**	59351	**EO Index:**	59387	**Element Last Seen:**	XXXX-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	XXXX-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2005-01-14

Quad Summary: Auburn (3812181)
County Summary: El Dorado, Placer

Lat/Long:	38.90211 / -121.07070	**Accuracy:**	1 mile
UTM:	Zone-10 N4307683 E667297	**Elevation (ft):**	1325
PLSS:	T12N, R08E, Sec. 10 (M)	**Acres:**	0.0

Location: AUBURN.
Detailed Location:
Ecological: FEMALES OF THIS SPECIES COLLECT POLLEN PRIMARILY FROM ARENARIA, BUT ALSO ORTHOCARPUS ERIANTHUS AND LASTHENIA SP.
General: AN UNKNOWN NUMBER OF FEMALES COLLECTED, DATE UNKNOWN.
Owner/Manager: UNKNOWN

Cosumnoperla hypocrena

Element Code: IIPLE23020

Cosumnes stripetail

Listing Status: **Federal:** None
State: None
Other:

CNDDB Element Ranks: **Global:** G2
State: S2

Habitat: **General:** FOUND IN INTERMITTENT STREAMS ON WESTERN SLOPE OF CENTRAL SIERRA NEVADA FOOTHILLS IN AMERICAN AND COSUMNES RIVER BASINS.

Micro: □

Occurrence No.	3	**Map Index:**	87172	**EO Index:**	88137	**Element Last Seen:**	1988-03-06
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1988-03-06
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2012-11-06

Quad Summary: Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.86838 / -121.02781	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4304019 E671098	**Elevation (ft):**	1391
PLSS:	T12N, R08E, Sec. 25, NE (M)	**Acres:**	31.0

Location: UNNAMED TRIBUTARY TO KNICKERBOCKER CREEK, ABOUT 4 KM NW OF PILOT HILL, AUBURN STATE RECREATION AREA.

Detailed Location: COLLECTION FROM "UNNAMED TRIBUTARY TO KNICKERBOCKER CREEK (424 M), 4 KM NW OF PILOT HILL." MAPPED TO GENERAL AREA DESCRIBED.

Ecological:

General: 20 LARVAE COLLECTED 6-7 FEB AND 1 LARVA COLLECTED 6 MAR 1988. COLLECTION BY R.L. BOTTORFF.

Owner/Manager: DPR-AUBURN SRA

Occurrence No.	4	**Map Index:**	87173	**EO Index:**	88138	**Element Last Seen:**	1989-02-18
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1989-02-18
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2012-11-06

Quad Summary: Auburn (3812181)

County Summary: El Dorado

Lat/Long:	38.90886 / -121.02677	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4308514 E671091	**Elevation (ft):**	1027
PLSS:	T12N, R08E, Sec. 12, NE (M)	**Acres:**	19.0

Location: UNNAMED TRIBUTARY OF MIDDLE FORK AMERICAN RIVER AT LOUISIANA BAR, ABOUT 3 KM NW OF COOL.

Detailed Location: COLLECTION AT "UNNAMED TRIBUTARY OF MIDDLE FORK AMERICAN RIVER, 3 KM NW OF COOL (313 M)." MAPPED TO GENERAL AREA DESCRIBED.

Ecological:

General: 1 LARVA COLLECTED 18 FEB 1989 BY R.L. BOTTORFF.

Owner/Manager: DPR-AUBURN SRA, UNKNOWN

Occurrence No.	5	**Map Index:**	87175	**EO Index:**	88139	**Element Last Seen:**	1989-02-26
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1989-02-26
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2012-11-06

Quad Summary: Coloma (3812078), Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.83115 / -120.99816	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4299944 E673761	**Elevation (ft):**	984
PLSS:	T11N, R09E, Sec. 05 (M)	**Acres:**	74.0

Location: BLUE TENT CREEK & UNNAMED TRIBUTARY ABOUT 1 KM SE OF PILOT HILL.

Detailed Location: COLLECTION AT "BLUE TENT CREEK AND UNNAMED TRIBUTARY (300 M), 1 KM SE OF PILOT HILL." MAPPED TO GENERAL AREA DESCRIBED.

Ecological:

General: 2 LARVAE COLLECTED 18 FEB & 5 LARVAE COLLECTED 26 FEB 1989 BY R.L. BOTORFF.

Owner/Manager: UNKNOWN

Occurrence No.	10	**Map Index:**	87221	**EO Index:**	88187	**Element Last Seen:**	1988-04-02
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1988-04-02
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2012-11-08

Quad Summary: Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.83388 / -121.04983	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4300149 E669269	**Elevation (ft):**	961
PLSS:	T11N, R08E, Sec. 02, E (M)	**Acres:**	37.0

Location: COOPER CANYON CREEK ABOUT 3 KM WEST OF PILOT HILL.

Detailed Location: COLLECTION AT "COOPER CANYON CREEK (293 M), 3 KM W OF PILOT HILL. MAPPED TO GENERAL AREA DESCRIBED.

Ecological:

General: 4 LARVAE COLLECTED 2 APR 1988 BY R.L. BOTORFF.

Owner/Manager: UNKNOWN

Occurrence No.	11	**Map Index:**	87222	**EO Index:**	88188	**Element Last Seen:**	1998-03-29
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1998-03-29
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2012-11-08

Quad Summary: Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.85841 / -121.04251	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4302885 E669846	**Elevation (ft):**	1352
PLSS:	T12N, R08E, Sec. 25, SW (M)	**Acres:**	22.0

Location: UNNAMED TRIBUTARY TO NORTH FORK AMERICAN RIVER, ABOUT 4 KM NW OF PILOT HILL, AUBURN STATE RECREATION AREA.

Detailed Location: COLLECTION AT "UNNAMED TRIBUTARY TO NORTH FORK AMERICAN RIVER (412 M), 4 KM NW OF PILOT HILL." MAPPED TO GENERAL AREA DESCRIBED.

Ecological:

General: 1 LARVA COLLECTED 29 MAR 1998 BY R.L. BOTORFF.

Owner/Manager: USBOR-AUBURN SRA

Banksula californica **Element Code:** ILARA14020

Alabaster Cave harvestman

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	GH
	State:	None		**State:**	SH
	Other:				
Habitat:	**General:**	KNOWN ONLY FROM THE TYPE LOCALITY, ALABASTER CAVE, EL DORADO COUNTY.			
	Micro:	THE TYPE LOCALITY HAS BEEN PARTLY DESTROYED BY MINING AND THE SPECIES MAY BE EXTINCT.			

Occurrence No.	1 **Map Index:** 58628	**EO Index:**	58664	**Element Last Seen:**	XXXX-XX-XX
Occ. Rank:	None	**Presence:**	Possibly Extirpated	**Site Last Seen:**	XXXX-XX-XX
Occ. Type:	Natural/Native occurrence	**Trend:**	Unknown	**Record Last Updated:**	2004-12-15

Quad Summary: Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.81003 / -121.07538	**Accuracy:**	2/5 mile
UTM:	Zone-10 N4297455 E667107	**Elevation (ft):**	650
PLSS:	T11N, R08E, Sec. 15 (M)	**Acres:**	0.0

Location: ALABASTER CAVE, 5.5 MILES WEST OF PILOT HILL ALONGSIDE RATTLESNAKE BAR RD.

Detailed Location:

Ecological: SPECIES WAS DESCRIBED BY BANKS IN 1900 & IS KNOWN ONLY FROM ALABASTER CAVE, WHICH HAS SINCE BEEN PARTIALLY DESTROYED BY MINING & VANDALISM; REMAINING PORTIONS HAVE BEEN SEALED OFF WITH CONCRETE, SO SPECIES MAY NOT EXIST HERE ANYMORE.

General: LECTOTYPE MALE AND PARALECTOTYPE FEMALE COLLECTED BY MARX AND DEPOSITED AT THE MUSEUM OF COMPARATIVE ZOOLOGY, HARVARD.

Owner/Manager: UNKNOWN

Banksula galilei **Element Code:** ILARA14040

Galile's cave harvestman

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G1
	State:	None		**State:**	S1
	Other:				
Habitat:	**General:**	KNOWN ONLY FROM THE TYPE LOCALITY, LIME ROCK CAVES, EL DORADO COUNTY.			
	Micro:	SPECIES IS TROGLOBITIC.			

Occurrence No.	1	**Map Index:** 58629	**EO Index:**	58665	**Element Last Seen:**	1966-12-21
Occ. Rank:	Unknown		**Presence:**	Presumed Extant	**Site Last Seen:**	1966-12-21
Occ. Type:	Natural/Native occurrence		**Trend:**	Unknown	**Record Last Updated:**	2004-12-15

Quad Summary: Auburn (3812181)

County Summary: Placer

Lat/Long:	38.94833 / -121.00955	**Accuracy:**	1/5 mile
UTM:	Zone-10 N4312926 E672488	**Elevation (ft):**	1450
PLSS:	T13N, R09E, Sec. 30, SE (M)	**Acres:**	0.0

Location: LIME ROCK CAVES, SOUTH OF CLIPPER GAP AND NORTH OF NORTH FORK OF THE AMERICAN RIVER.

Detailed Location: ACCORDING TO HALLIDAY'S "CAVES OF CALIFORNIA," CAVE SYSTEM CONSISTS OF 5 SMALL CAVES AND ONE LARGER CAVE (ROBBER'S CAVE) IN A LIMESTONE PINNACLE.

Ecological: HOLOTYPE MALE COLLECTED UNDER BREAKDOWN IN PIT ROOM.

General: KNOWN FROM 9 TYPE SPECIMENS COLLECTED FROM 2 JUN TO 21 DEC 1966, TWO OF THE PARATYPES WERE COLLECTED FROM LIME ROCK CAVE #3. HOLOTYPE DEPOSITED IN THE CALIFORNIA ACADEMY OF SCIENCES, TYPE #11966.

Owner/Manager: UNKNOWN

Margaritifera falcata

Element Code: IMBIV27020

western pearlshell

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G4G5
	State:	None		**State:**	S1S2
	Other:				
Habitat:	**General:**	AQUATIC.			
	Micro:	PREFERS LOWER VELOCITY WATERS.			

Occurrence No.	31	**Map Index:** 85537	**EO Index:** 86555	**Element Last Seen:**	2006-08-23
Occ. Rank:	Unknown		**Presence:** Presumed Extant	**Site Last Seen:**	2006-08-23
Occ. Type:	Natural/Native occurrence		**Trend:** Unknown	**Record Last Updated:**	2012-03-20

Quad Summary: Colfax (3912018)

County Summary: Placer

Lat/Long:	39.04068 / -120.90145	**Accuracy:**	80 meters
UTM:	Zone-10 N4323387 E681620	**Elevation (ft):**	965
PLSS:	T14N, R10E, Sec. 19, SW (M)	**Acres:**	0.0

Location: SHIRTTAIL CANYON CREEK AT CONFLUENCE WITH NORTH FORK AMERICAN RIVER.

Detailed Location: YANKEE JIM'S ROAD TO BRIDGE OVER NORTH FORK AMERICAN RIVER. COLLECTION ID: JKH06-077.

Ecological: ALL POSSIBLE HABITATS WHERE MUSSELS COULD OCCUR WERE CHECKED, INCLUDING ROOT AND SEDGE MATS, ROCK CREVICES, UNDER WOODY DEBRIS (LOGS), WITHIN AQUATIC VEGETATION, ETC.

General: MUSSELS HAND COLLECTED BY SNORKELING OR SCUBA DIVING, & BY DIRECT OBSERVATION IN SHALLOW AREAS. 1 MARGARITIFERA FOUND ON 23 AUG 2006. MUSSELS SPARSELY DISPERSED & NOT FOUND IN DENSE BEDS.

Owner/Manager: DPR-AUBURN SRA

Ammonitella yatesii

Element Code: IMGASB0010

tight coin (=Yates' snail)

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G1
	State:	None		**State:**	S1
	Other:	IUCN_VU-Vulnerable			
Habitat:	**General:**	INHABITS LIMESTONE CAVES AND OUTCROPPINGS; FAVORS NORTH-FACING SLOPES.			
	Micro:	FOUND IN HUMUS IN LIMESTONE OUTCROPPINGS.			

Occurrence No.	6	**Map Index:** 12187	**EO Index:** 23096	**Element Last Seen:**	XXXX-XX-XX
Occ. Rank:	Unknown		**Presence:** Presumed Extant	**Site Last Seen:**	XXXX-XX-XX
Occ. Type:	Natural/Native occurrence		**Trend:** Unknown	**Record Last Updated:**	2005-12-05

Quad Summary: Auburn (3812181)

County Summary: El Dorado

Lat/Long:	38.90073 / -121.01550	**Accuracy:**	1/5 mile
UTM:	Zone-10 N4307632 E672088	**Elevation (ft):**	1360
PLSS:	T12N, R09E, Sec. 07, SE (M)	**Acres:**	0.0

Location: PIONEER CAVE.

Detailed Location:

Ecological: FOUND IN HUMUS AROUND LIMESTONE OUTCROPPINGS; FAVORS NORTH-FACING SLOPES.

General: A RELICT GENUS, THOUGH COMMON AT PRESENT, WHERE FOUND.

Owner/Manager: PVT

Balsamorhiza macrolepis

Element Code: PDAST11061

big-scale balsamroot

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G2
	State:	None		**State:**	S2
	Other:	Rare Plant Rank - 1B.2, BLM_S-Sensitive, USFS_S-Sensitive			
Habitat:	**General:**	CHAPARRAL, VALLEY AND FOOTHILL GRASSLAND, CISMONTANE WOODLAND.			
	Micro:	SOMETIMES ON SERPENTINE. 35-1465 M.			

Occurrence No.	14	**Map Index:** 37777	**EO Index:** 32784	**Element Last Seen:**	XXXX-XX-XX
Occ. Rank:	None		**Presence:** Possibly Extirpated	**Site Last Seen:**	XXXX-XX-XX
Occ. Type:	Natural/Native occurrence		**Trend:** Unknown	**Record Last Updated:**	1997-12-29

Quad Summary: Pilot Hill (3812171)

County Summary: El Dorado, Placer

Lat/Long:	38.82507 / -121.09660	**Accuracy:**	1 mile
UTM:	Zone-10 N4299085 E665230	**Elevation (ft):**	600
PLSS:	T11N, R08E, Sec. 09 (M)	**Acres:**	0.0

Location: RATTLESNAKE BEND, PLACER COUNTY.

Detailed Location: UNABLE TO LOCATE "RATTLESNAKE BEND". OCCURRENCE MAPPED AT SITE OF HISTORICAL RATTLESNAKE BAR ALONG THE NORTH FORK AMERICAN RIVER. THIS SITE WAS INUNDATED BY FOLSOM LAKE.

Ecological:

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IN UNDATED COLLECTION BY A. KING. NEEDS FIELDWORK.

Owner/Manager: UNKNOWN

Packera layneae

Element Code: PDAST8H1V0

Layne's ragwort

Listing Status:	**Federal:**	Threatened	**CNDDB Element Ranks:**	**Global:**	G2
	State:	Rare		**State:**	S2
	Other:	Rare Plant Rank - 1B.2, SB_RSABG-Rancho Santa Ana Botanic Garden, SB_UCBG-UC Botanical Garden at Berkeley, SB_UCSC-UC Santa Cruz			
Habitat:	**General:**	CHAPARRAL, CISMONTANE WOODLAND.			
	Micro:	ULTRAMAFIC SOIL (SERPENTINE OR GABBRO); OCCASIONALLY ALONG STREAMS. 205-1060 M.			

Occurrence No.	27	**Map Index:** 12415	**EO Index:** 16854	**Element Last Seen:**	1984-03-XX
Occ. Rank:	Unknown		**Presence:** Presumed Extant	**Site Last Seen:**	1984-03-XX
Occ. Type:	Natural/Native occurrence		**Trend:** Unknown	**Record Last Updated:**	2008-11-26

Quad Summary: Shingle Springs (3812068), Coloma (3812078)

County Summary: El Dorado

Lat/Long:	38.74737 / -120.93223	**Accuracy:**	1/5 mile
UTM:	Zone-10 N4290773 E679694	**Elevation (ft):**	1000
PLSS:	T10N, R09E, Sec. 01, SE (M)	**Acres:**	0.0

Location: EAST SIDE OF LOTUS RD NORTH OF BRIDGE, APPROX 2.0 AIR MI W OF FUNNY BUG MINE.

Detailed Location: GROWING IN CUTBANK ON THE E SIDE OF LOTUS RD; "CROSS BRIDGE GOING N AND LOOK TO RIGHT." MAPPED BY CNDDB AS BEST GUESS AT THE INTERSECTION OF LOTUS RD & CREEK IN THE SE1/4 OF SECTION 1.

Ecological: THIN SERPENTINE SOIL OVER SERPENTINE ROCK ON CUT ROAD BANK.

General: FEWER THAN 50 PLANTS SEEN IN 1984. NEEDS FIELDWORK.

Owner/Manager: PVT

Occurrence No.	29	**Map Index:**	12208	**EO Index:**	8132	**Element Last Seen:**	1984-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1984-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	1993-02-19

Quad Summary: Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.75679 / -121.00610	**Accuracy:**	specific area
UTM:	Zone-10 N4291675 E673252	**Elevation (ft):**	960
PLSS:	T11N, R09E, Sec. 32, SW (M)	**Acres:**	8.4

Location: SOUTH OF THE SOUTH FORK AMERICAN RIVER, NORTH OF WILDCAT CANYON, 0.4 AIR MI NORTH OF 1482 FT ELEVATION MARKER ON HILL.

Detailed Location:

Ecological: ASSOCIATED WITH WYETHIA RETICULATA, HELIANTHEMUM SUFFRUTESCENS.

General: SEEN 1981-1984. LARGE POPULATION.

Owner/Manager: BLM-FOLSOM RA

Occurrence No.	30	**Map Index:**	12172	**EO Index:**	8130	**Element Last Seen:**	1993-05-16
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	1993-05-16
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2007-07-19

Quad Summary: Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.76712 / -121.02217	**Accuracy:**	80 meters
UTM:	Zone-10 N4292791 E671831	**Elevation (ft):**	1120
PLSS:	T11N, R09E, Sec. 31, NW (M)	**Acres:**	0.0

Location: SOUTH OF SOUTH FORK AMERICAN RIVER NEAR TOP OF RIDGE EAST OF SALMON FALLS ROAD CROSSING.

Detailed Location:

Ecological: CHAPARRAL DOMINATED BY ARCTOSTAPHYLOS VISCIDA AND ADENOSTOMA FASCICULATUM. ASSOCIATED WITH CALYSTEGIA STEBBINSII. RESCUE SOIL SERIES.

General: LARGE POPULATION SEEN 1981-1984. POPULATION SIGHTED AGAIN IN 1987 DURING SURVEY FOR CALYSTEGIA STEBBINSII. SIZE AND SPECIFICS OF POPULATION ARE UNKNOWN. COLLECTED IN THIS VICINITY BY AYRES IN 1993.

Owner/Manager: PVT

Occurrence No.	31	**Map Index:**	12142	**EO Index:**	8115	**Element Last Seen:**	1984-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1984-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	1993-02-19

Quad Summary: Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.75659 / -121.03253	**Accuracy:**	80 meters
UTM:	Zone-10 N4291604 E670956	**Elevation (ft):**	1100
PLSS:	T11N, R08E, Sec. 36, SE (M)	**Acres:**	0.0

Location: SOUTH OF SOUTH FORK AMERICAN RIVER, EAST OF SALMON FALLS RD.

Detailed Location: MAPPED 0.5 AIR MILE NE OF 1361 FT ELEVATION MARK ON HILL.

Ecological:

General: SEEN 1981-1984.

Owner/Manager: PVT

Occurrence No.	32	**Map Index:**	12119	**EO Index:**	8120	**Element Last Seen:**	1984-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1984-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	1993-02-19

Quad Summary:	Pilot Hill (3812171)
County Summary:	El Dorado

Lat/Long:	38.76419 / -121.04430	**Accuracy:**	80 meters
UTM:	Zone-10 N4292425 E669915	**Elevation (ft):**	680
PLSS:	T11N, R08E, Sec. 35, NE (M)	**Acres:**	0.0

Location:	JUST W OF SALMON FALLS RD, 0.75 MI S OF BRIDGE OVER SOUTH FORK AMERICAN RIVER.
Detailed Location:	MAPPED ON KNOLL TO THE NORTH OF DIRT ROAD WEST OF SALMON FALLS ROAD.
Ecological:	SEVERAL OTHER SENSITIVE PLANTS IN THE AREA INCLUDING CALYSTEGIA STEBBINSII AND CEANOTHUS RODERICKII.
General:	SEEN 1981-1984.
Owner/Manager:	PVT

Occurrence No.	39	**Map Index:**	22741	**EO Index:**	8306	**Element Last Seen:**	1986-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1986-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	1993-02-19

Quad Summary:	Coloma (3812078)
County Summary:	El Dorado

Lat/Long:	38.81997 / -120.88014	**Accuracy:**	80 meters
UTM:	Zone-10 N4298933 E684035	**Elevation (ft):**	1760
PLSS:	T11N, R10E, Sec. 08, NE (M)	**Acres:**	0.0

Location:	2 KM (1.5 MI) NORTH OF COLOMA, 1.3 KM (0.8 MI) NORTH OF MURPHY MOUNTAIN SUMMIT, JUST WEST OF ROAD.
Detailed Location:	
Ecological:	
General:	MAP DETAIL IS ONLY SOURCE OF INFORMATION FOR THIS SITE; UNKNOWN NUMBER OF PLANTS SEEN IN 1986. NEEDS FIELDWORK.
Owner/Manager:	UNKNOWN

Occurrence No.	47	**Map Index:**	44952	**EO Index:**	44952	**Element Last Seen:**	2000-09-28
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2000-09-28
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2001-02-20

Quad Summary: Coloma (3812078)

County Summary: El Dorado

Lat/Long:	38.78723 / -120.98366	**Accuracy:**	specific area
UTM:	Zone-10 N4295096 E675128	**Elevation (ft):**	780
PLSS:	T11N, R09E, Sec. 21, SW (M)	**Acres:**	1.7

Location: WEST SIDE OF CANYON OF SOUTH FORK OF AMERICAN RIVER, 0.35 MILE SOUTH OF CONFLUENCE WITH NORTON RAVINE, WSW OF COLOMA.

Detailed Location: ON BOTH SIDES OF ROAD (NOT ON TOPO MAP) ALONG SOUTH FORK AMERICAN RIVER FROM EQUESTRIAN WAY NORTHWEST & NORTH (UPSTREAM) TO NORTON RAVINE, APPROX 0.5 MILE SOUTH OF WHERE ROAD REACHES NORTON RAVINE. MAPPED AT CENTER OF SW 1/4 OF SECTION 21.

Ecological: GROWING ON SURFACE & CUT SLOPE OF DIRT ROAD IN TRANSITION OF CHAPARRAL TO PONDEROSA PINE FOREST. ASSOCIATES: QUERCUS WISLIZENI, PINUS PONDEROSA, ARCTOSTAPHYLOS VISCIDA, LUPINUS ALBIFRONS, & ERIOPHYLLUM LANATUM. AUBURN ROCKY SILT LOAM.

General: APPROXIMATELY 120 PLANTS SEEN IN 2000, IN AN AREA OF LESS THAN 0.1 ACRE. SITE IS DISTURBED BUT PLANTS APPEAR TO BE DOING FINE. THIS LAND IS A RELATIVELY NEW ACQUISITION BY BLM; A PLANNING PROCESS FOR THE AREA IS CURRENTLY UNDERWAY.

Owner/Manager: BLM

Occurrence No.	48	**Map Index:**	44955	**EO Index:**	44955	**Element Last Seen:**	1962-05-30
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1962-05-30
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2001-02-20

Quad Summary: Coloma (3812078)

County Summary: El Dorado

Lat/Long:	38.76881 / -120.92544	**Accuracy:**	2/5 mile
UTM:	Zone-10 N4293165 E680231	**Elevation (ft):**	1500
PLSS:	T11N, R09E, Sec. 36 (M)	**Acres:**	0.0

Location: 2.8 MILES WEST OF GOLD HILL.

Detailed Location: EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDB AT 2.8 MILES WEST OF GOLD HILL ALONG GOLD HILL ROAD IN VICINITY OF FOUR CORNERS. ELEVATION ON HERB LABEL GIVEN AS 1500'.

Ecological: HABITAT IN SERPENTINE.

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1962 COLLECTION BY BACIGALUPI & HECKARD. NEEDS FIELDWORK.

Owner/Manager: UNKNOWN

Occurrence No.	61	**Map Index:** 73023	**EO Index:**	73941	**Element Last Seen:**	2007-03-26
Occ. Rank:	Fair		**Presence:**	Presumed Extant	**Site Last Seen:**	2007-03-26
Occ. Type:	Natural/Native occurrence		**Trend:**	Unknown	**Record Last Updated:**	2008-12-01

Quad Summary: Coloma (3812078)

County Summary: El Dorado

Lat/Long:	38.76025 / -120.93939	**Accuracy:**	80 meters
UTM:	Zone-10 N4292188 E679040	**Elevation (ft):**	1115
PLSS:	T11N, R09E, Sec. 35, SE (M)	**Acres:**	0.0

Location: E SIDE OF SPRINGVALE RD JUST N OF THE SPILLWAY, NNW OF SPRINGVALE SCHOOL.

Detailed Location: MAPPED BY CNDDB ACCORDING TO A 2007 WILLSON MAP IN THE NW1/4 OF THE SE1/4 SEC 35.

Ecological: CHAPARRAL WITHIN MIXED OAK WOODLAND. ASSOCIATED WITH CEANOTHUS CUNEATUS ON SERPENTINE SOIL, SW ASPECT. CHLOROGALUM GRANDIFLORUM ALSO OCCURS AT THIS SITE.

General: 300 PLANTS SEEN IN 2007.

Owner/Manager: PVT

Wyethia reticulata

Element Code: PDAST9X0D0

El Dorado County mule ears

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G2
	State:	None		**State:**	S2
	Other:	Rare Plant Rank - 1B.2, BLM_S-Sensitive, SB_RSABG-Rancho Santa Ana Botanic Garden			
Habitat:	**General:**	CHAPARRAL, CISMONTANE WOODLAND, LOWER MONTANE CONIFEROUS FOREST.			
	Micro:	STONY RED CLAY AND GABBROIC SOILS; OFTEN IN OPENINGS IN GABBRO CHAPARRAL. 120-630 M.			

Occurrence No.	15	**Map Index:** 12126	**EO Index:**	7487	**Element Last Seen:**	1986-XX-XX
Occ. Rank:	Unknown		**Presence:**	Presumed Extant	**Site Last Seen:**	1986-XX-XX
Occ. Type:	Natural/Native occurrence		**Trend:**	Unknown	**Record Last Updated:**	2007-07-26

Quad Summary: Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.76701 / -121.04187	**Accuracy:**	specific area
UTM:	Zone-10 N4292743 E670119	**Elevation (ft):**	680
PLSS:	T11N, R08E, Sec. 36, NW (M)	**Acres:**	42.0

Location: SOUTH OF SOUTH FORK AMERICAN RIVER, WEST OF SALMON FALLS, ALONG SALMON FALLS ROAD AND 4WD ROAD.

Detailed Location: ABOUT 0.5 MILE SOUTH OF NATOMAS DIVERSION DAM. TWO COLONIES MAPPED MOSTLY WITHIN THE NW 1/4 OF SECTION 36 AND THE NE 1/4 OF SECTION 35.

Ecological:

General: UNKNOWN NUMBER OF PLANTS SEEN BY WILSON IN 1986. INCLUDES FORMER OCCURRENCE #21.

Owner/Manager: UNKNOWN

Occurrence No.	16	**Map Index:**	12186	**EO Index:**	7479	**Element Last Seen:**	2014-04-09
Occ. Rank:	Excellent			**Presence:**	Presumed Extant	**Site Last Seen:**	2014-04-09
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2019-01-02

Quad Summary: Coloma (3812078), Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.76311 / -121.016	**Accuracy:**	specific area
UTM:	Zone-10 N4292358 E672377	**Elevation (ft):**	1000
PLSS:	T11N, R09E, Sec. 31 (M)	**Acres:**	181.0

Location: BOTH SIDES OF SOUTH FORK AMERICAN RIVER, NEAR THE MOUTH OF WEBER CREEK.

Detailed Location: MAPPED BY CNDDB AS 26 POLYGONS IN SECTION 30, SECTION 31, W 1/2 OF SECTION 32, E 1/2 OF SECTION 36, N 1/2 OF SECTION 5, AND NW 1/4 OF SECTION 6.

Ecological: ON RESCUE SOILS IN CHAPARRAL. WITH ADENOSTOMA FASCICULATUM, ARCTOSTAPHYLOS VISCIDA, CEANOTHUS RODERICKII, ERIODICTYON CALIFORNICUM, HETEROMELES ARBUTIFOLIA, QUERCUS DURATA, SALVIA SONOMENSIS, CALYSTEGIA STEBBINSII, LOTUS SCOPARIUS, ETC.

General: SCATTERED INDIVIDUALS IN 1984. UNK NUMBER OF PLANTS SEEN IN 1986, 1987, 1989, 1990, 1992, & 1993. 100,000+ PLANTS IN 1994. >2500 IN NE COLONY IN 2006, 1000S IN 2007, SEEN IN 2012 & 2014. INCL FORMER EO #17, 18, 19, 20, 26 & 35.

Owner/Manager: PVT, DFG, BLM

Occurrence No.	22	**Map Index:**	12118	**EO Index:**	7484	**Element Last Seen:**	2006-07-28
Occ. Rank:	Fair			**Presence:**	Presumed Extant	**Site Last Seen:**	2006-07-28
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2007-07-26

Quad Summary: Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.75881 / -121.04498	**Accuracy:**	specific area
UTM:	Zone-10 N4291827 E669868	**Elevation (ft):**	400
PLSS:	T11N, R08E, Sec. 35, SE (M)	**Acres:**	22.0

Location: SOUTH OF SOUTH FORK AMERICAN RIVER, ON BOTH SIDES OF SALMON FALLS ROAD, 0.6 AIR MILE EAST OF CEMETERY.

Detailed Location: THREE COLONIES.

Ecological: GABBROIC NORTHERN MIXED CHAPARRAL.

General: UNKNOWN NUMBERS OF PLANTS OBSERVED ON THE EAST SIDE OF THE ROAD SOMETIME BETWEEN 1981 AND 1984, AS WELL AS IN 1986. APPROXIMATELY 780 PLANTS OBSERVED ON THE WEST SIDE OF THE ROAD IN 2006.

Owner/Manager: PVT

Occurrence No.	36	**Map Index:** 51655	**EO Index:**	51655	**Element Last Seen:**	1986-XX-XX
Occ. Rank:	Unknown		**Presence:**	Presumed Extant	**Site Last Seen:**	1986-XX-XX
Occ. Type:	Natural/Native occurrence		**Trend:**	Unknown	**Record Last Updated:**	2003-06-27

Quad Summary: Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.75150 / -121.04512	**Accuracy:**	80 meters
UTM:	Zone-10 N4291015 E669873	**Elevation (ft):**	620
PLSS:	T10N, R08E, Sec. 01, NE (M)	**Acres:**	0.0

Location: SOUTHEAST OF SALMON FALLS ROAD AT 90 DEGREE CURVE, SOUTH OF THE SOUTH FORK AMERICAN RIVER AND PILOT HILL.

Detailed Location: ON EAST SIDE OF ROAD ABOUT 0.1-0.2 MILE SOUTH OF TURNOFF TO SWEETWATER CREEK BRANCH OF FOLSOM LAKE. MAPPED NEAR THE CENTER OF THE NE 1/4 OF SECTION 1.

Ecological: ON GABBRO SOILS.

General: UNKNOWN NUMBER OF PLANTS OBSERVED IN 1986.

Owner/Manager: UNKNOWN

Crocanthemum suffrutescens

Element Code: PDCIS020F0

Bisbee Peak rush-rose

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G2?Q
	State:	None		**State:**	S2?
	Other:	Rare Plant Rank - 3.2			
Habitat:	**General:**	CHAPARRAL.			
	Micro:	OFTEN ON SERPENTINE, GABBROIC, OR IONE FORMATION SOILS; IN OPENINGS IN CHAPARRAL. 45-840 M.			

Occurrence No.	18	**Map Index:** 12208	**EO Index:**	8133	**Element Last Seen:**	1984-XX-XX
Occ. Rank:	Unknown		**Presence:**	Presumed Extant	**Site Last Seen:**	1984-XX-XX
Occ. Type:	Natural/Native occurrence		**Trend:**	Unknown	**Record Last Updated:**	1993-02-19

Quad Summary: Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.75679 / -121.00610	**Accuracy:**	specific area
UTM:	Zone-10 N4291675 E673252	**Elevation (ft):**	960
PLSS:	T11N, R09E, Sec. 32, SW (M)	**Acres:**	8.4

Location: SOUTH OF SOUTH FORK AMERICAN RIVER, NORTH OF WILDCAT CANYON, 0.4 AIR MILES NORTH OF 1482 FOOT ELEVATION HILL.

Detailed Location:

Ecological: ASSOCIATED WITH SENECIO LAYNEAE AND WYETHIA RETICULATA, BOTH RARE PLANTS.

General: SEEN 1981-1984.

Owner/Manager: BLM-FOLSOM RA

Occurrence No.	19	**Map Index:**	12181	**EO Index:**	8135	**Element Last Seen:**	1984-XX-XX
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	1984-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	1993-02-19

Quad Summary:	Pilot Hill (3812171)
County Summary:	El Dorado

Lat/Long:	38.77819 / -121.01750	**Accuracy:**	specific area
UTM:	Zone-10 N4294029 E672210	**Elevation (ft):**	950
PLSS:	T11N, R09E, Sec. 30, NW (M)	**Acres:**	21.7

Location:	NORTH OF SOUTH FORK AMERICAN RIVER APPROXIMATELY ONE AIR MILE ENE OF SALMON FALLS ROAD CROSSING.
Detailed Location:	
Ecological:	ASSOCIATED WITH OTHER RARE PLANTS: CALYSTEGIA STEBBINSII AND WYETHIA RETICULATA.
General:	SEEN 1981-1984.
Owner/Manager:	BLM-FOLSOM RA

Occurrence No.	20	**Map Index:**	12156	**EO Index:**	7482	**Element Last Seen:**	2011-05-14
Occ. Rank:	Excellent			**Presence:**	Presumed Extant	**Site Last Seen:**	2011-05-14
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2013-08-28

Quad Summary:	Clarksville (3812161), Pilot Hill (3812171)
County Summary:	El Dorado

Lat/Long:	38.76331 / -121.02948	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4292355 E671205	**Elevation (ft):**	1000
PLSS:	T11N, R08E, Sec. 36, E (M)	**Acres:**	334.2

Location:	SOUTH OF S FORK AMERICAN RIVER, ABOUT 0.4 MILE EAST OF SALMON FALLS RD EXTENDING EAST ABOUT 1.5 MI, WEST OF FOLSOM LAKE.
Detailed Location:	HILLS SOUTH OF S FORK AMERICAN BETWEEN SALMON FALLS RD AND KANAKA VALLEY. WITHIN SE 1/4 SE 1/4 SECTION 25, SW 1/4 OF SW 1/4 SECTION 30, EAST HALF OF SECTION 36, NORTH HALF OF SECTION 31, WEST HALF OF SECTION 6, AND NW 1/4 SECTION 7.
Ecological:	CHAPARRAL DOMINATED BY ARCTOSTAPHYLOS VISCIDA AND ADENOSTOMA FASCICULATUM. ASSOCIATED WITH ERIODICTYON CALIFORNICUM, BACCHARIS PILULARIS SPP. CONSANGUINEA, SALVIA SONOMENSIS, CALYSTEGIA STEBBINSII, CEANOTHUS RODERICKII, ET AL.
General:	SEEN 1981-1984, 1987. 682 PLANTS SEEN AT SCATTERED SITES IN 1994. 15 PLANTS SEEN IN PORTION OF EO IN 2011. RARE ASSOCIATES: CALYSTEGIA STEBBINSII, CEANOTHUS RODERICKII, SENECIO LAYNEAE, AND WYETHIA RETICULATA. INCLUDES FORMER EO #17.
Owner/Manager:	DFG-PINE HILL ER, BLM, UNK

Occurrence No.	24	**Map Index:**	17323	**EO Index:**	7225	**Element Last Seen:**	1989-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1989-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2003-03-07

Quad Summary:	Pilot Hill (3812171)
County Summary:	El Dorado

Lat/Long:	38.77070 / -121.00928	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4293213 E672942	**Elevation (ft):**	1100
PLSS:	T11N, R09E, Sec. 30, SE (M)	**Acres:**	45.2

Location:	0.8 KM (0.5 MI) NORTH OF MOUTH OF WEBER CREEK, NORTH OF AMERICAN RIVER.
Detailed Location:	MAPPED ON KNOLL IN SE 1/4 OF SE 1/4 OF SECTION 30 AS DESCRIBED BY SOURCE.
Ecological:	GROWING WITHIN GABBRO CHAPARRAL PLANT ASSOCIATION WITH CALYSTEGIA STEBBINSII, WYETHIA RETICULATA, CHLOROGALUM GRANDIFLORUM, AND CEANOTHUS RODERICKII.
General:	SITE IS WITHIN THE BLM FOLSOM RESOURCE AREA.
Owner/Manager:	BLM-FOLSOM RA

Occurrence No.	34	**Map Index:**	42838	**EO Index:**	42838	**Element Last Seen:**	1987-06-26
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	1987-06-26
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2000-04-28

Quad Summary:	Pilot Hill (3812171)
County Summary:	El Dorado

Lat/Long:	38.76427 / -121.04338	**Accuracy:**	specific area
UTM:	Zone-10 N4292436 E669995	**Elevation (ft):**	750
PLSS:	T11N, R08E, Sec. 36, NW (M)	**Acres:**	7.4

Location:	SALMON FALLS ROAD, ABOUT 0.7 MILE SOUTH OF SALMON FALLS CROSSING, SOUTH OF SOUTH FORK OF THE AMERICAN RIVER.
Detailed Location:	TWO COLONIES: WEST COLONY ON BOTH SIDES OF THE ROAD. EASTERN COLONY ON SLOPE OF SMALL HILL TO THE EAST. MAPPED WITHIN THE SW 1/4 NW 1/4 OF SECTION 36 AND THE SE 1/4 NE 1/4 OF SECTION 35.
Ecological:	CHAPARRAL DOMINATED BY ARCTOSTAPHYLOS VISCIDA & ADENOSTOMA FASCICULATUM. RESCUE SOILS SERIES. ASSOCIATES: SALVIA SONOMENSIS, LEPECHINIA CALYCINA, RHAMNUS CALIFORNICUM, HETEROMELES ARBUTIFOLIA, CALYSTEGIA STEBBINSII, & CEANOTHUS RODERICKII.
General:	UNKNOWN NUMBER OF PLANTS OBSERVED IN 1987. SITE IS STAGING AREA FOR ORV USE NEAR HIGHWAY. RARE ASSOCIATES: CALYSTEGIA STEBBINSII AND CEANOTHUS RODERICKII.
Owner/Manager:	PVT

Occurrence No.	36	**Map Index:** 69700	**EO Index:**	70486	**Element Last Seen:**	2006-07-28
Occ. Rank:	Unknown		**Presence:**	Presumed Extant	**Site Last Seen:**	2006-07-28
Occ. Type:	Natural/Native occurrence		**Trend:**	Unknown	**Record Last Updated:**	2007-07-31

Quad Summary: Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.75896 / -121.04568	**Accuracy:**	specific area
UTM:	Zone-10 N4291842 E669807	**Elevation (ft):**	600
PLSS:	T11N, R08E, Sec. 35, SE (M)	**Acres:**	13.0

Location: WEST SIDE OF SALMON FALLS ROAD, NEAR THE INTERSECTION WITH HIDDEN BRIDGE ROAD, SOUTH OF SOUTH FORK AMERICAN RIVER.

Detailed Location:

Ecological: GABBROIC NORTHERN MIXED CHAPARRAL.

General: APPROXIMATELY 600 PLANTS OBSERVED IN 2006.

Owner/Manager: PVT

Calystegia stebbinsii

Element Code: PDCON040H0

Stebbins' morning-glory

Listing Status:	**Federal:**	Endangered	**CNDDB Element Ranks:**	**Global:**	G1
	State:	Endangered		**State:**	S1
	Other:	Rare Plant Rank - 1B.1, SB_RSABG-Rancho Santa Ana Botanic Garden			
Habitat:	**General:**	CHAPARRAL, CISMONTANE WOODLAND.			
	Micro:	ON RED CLAY SOILS OF THE PINE HILL FORMATION; GABBRO OR SERPENTINE; OPEN AREAS. 300-705 M.			

Occurrence No.	2	**Map Index:** 54107	**EO Index:**	4344	**Element Last Seen:**	2013-06-10
Occ. Rank:	Excellent		**Presence:**	Presumed Extant	**Site Last Seen:**	2013-06-10
Occ. Type:	Natural/Native occurrence		**Trend:**	Unknown	**Record Last Updated:**	2017-12-08

Quad Summary: Coloma (3812078), Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.76347 / -121.02388	**Accuracy:**	specific area
UTM:	Zone-10 N4292383 E671691	**Elevation (ft):**	1000
PLSS:	T11N, R09E, Sec. 31 (M)	**Acres:**	379.0

Location: SOUTH FORK AMERICAN RIVER, FROM SALMON FALLS ROAD EAST TO WEBER CREEK, NORTH OF MORMON HILL.

Detailed Location: SEVERAL COLONIES MAPPED BY CNDDB AS 22 POLYGONS MOSTLY IN SECTIONS 30, 31, 36, WEST HALF OF SECTION 32, AND NW 1/4 OF SECTION 6.

Ecological: IN GABBRO, ASSOCIATED WITH ADENOSTOMA FASCICULATUM, ARCTOSTAPHYLOS VISCIDA, SALVIA SONOMENSIS, LEPECHINIA CALYCINA, RHAMNUS CALIFORNICA, CEANOTHUS RODERICKII, WYETHIA RETICULATA, CHLOROGALUM GRANDIFLORUM, HELIANTHEMUM SUFFRUCTESCENS, ETC.

General: <2000 PLANTS OBSERVED IN 1984, 300+ IN 1986, 1300+ IN 1987, UNKNOWN # IN 1989, 20-35 IN 1990, >>1000 IN 1992, <1.5 MILL IN 1993, ~600 IN 1994, UNKNOWN # IN 2005, >15,000 IN 2007, SEEN IN 2012 & 2013. INCLUDES FORMER OCCS 9-12, 14-17, & 23.

Owner/Manager: BLM, DFG, USBOR, PVT

Viburnum ellipticum

Element Code: PDCPR07080

oval-leaved viburnum

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G4G5
	State:	None		**State:**	S3?
	Other:	Rare Plant Rank - 2B.3			

Habitat:	**General:**	CHAPARRAL, CISMONTANE WOODLAND, LOWER MONTANE CONIFEROUS FOREST.
	Micro:	215-1400 M.

Occurrence No.	19	**Map Index:**	61070	**EO Index:**	61106	**Element Last Seen:**	2006-06-06
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2006-06-06
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2008-12-31

Quad Summary:	Greenwood (3812088), Auburn (3812181)
County Summary:	Placer

Lat/Long:	38.93872 / -121.00198	**Accuracy:**	80 meters
UTM:	Zone-10 N4311875 E673167	**Elevation (ft):**	1300
PLSS:	T13N, R09E, Sec. 32, NW (M)	**Acres:**	0.0

Location:	OFF OF LAKE CLEMENTINE ROAD, 0.3 MI SOUTH OF NORTH FORK LAKE; ABOUT 0.7 MI WEST OF SQUAW FLAT.
Detailed Location:	FROM FIRST PARKING LOT ON LAKE CLEMENTINE RD (NOT ON TOPO - OFF OF FOREST HILL RD), TAKE FOOTPATH DOWNHILL TO WIDE DIRT ACCESS ROAD. ABOUT 0.25 MI, JUST PAST ROCK OUTCROP ARE V. ELLIPTICUM, ON BOTH SIDES OF RD. SE 1/4 NW 1/4 OF SEC 32.
Ecological:	SHADY, N-FACING SLOPES IN MIXED CONIFER FOREST. FOUND WITH ARBUTUS MENZIESII, PHILADELPHUS LEWISII, STYRAX OFFICINALIS, ADIANTUM JORDANII. OTHER RARE SPP: CLARKIA BILOBA SSP. BRANDEGEAE ON LAKE CLEMENTINE RD.
General:	5 PLANTS OBSERVED IN 2004. UNKNOWN NUMBER SEEN IN 2006.
Owner/Manager:	USBOR-AUBURN SRA

Occurrence No.	20	**Map Index:**	61072	**EO Index:**	61108	**Element Last Seen:**	2004-05-11
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2004-05-11
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2005-04-21

Quad Summary:	Auburn (3812181)
County Summary:	Placer

Lat/Long:	38.93161 / -121.03055	**Accuracy:**	80 meters
UTM:	Zone-10 N4311031 E670708	**Elevation (ft):**	1300
PLSS:	T13N, R08E, Sec. 36, SE (M)	**Acres:**	0.0

Location:	ALONG LAKE CLEMENTINE ROAD, 0.5 MI SW OF NORTH FORK LAKE DAM; AUBURN STATE RECREATION AREA.
Detailed Location:	0.25 MI ON LAKE CLEMENTINE TRAIL FROM LAKE CLEMENTINE RD, PLANTS ARE JUST PAST THE DRAINAGE/CULVERT PIPE ON LEFT. SE 1/4 OF SE 1/4 OF SECTION 36.
Ecological:	SHADY, N-FACING SLOPES IN MIXED CONIFER FOREST. FOUND WITH ARBUTUS MENZIESII, PHILADELPHUS LEWISII, STYRAX OFFICINALIS, ADIANTUM JORDANII. OTHER RARE SPP: CLARKIA BILOBA SSP. BRANDEGEAE ON LAKE CLEMENTINE RD.
General:	3 PLANTS OBSERVED IN 2004.
Owner/Manager:	USBOR-AUBURN SRA

Occurrence No.	33	**Map Index:**	96178	**EO Index:**	97348	**Element Last Seen:**	2013-04-18
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2013-04-18
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2015-05-21

Quad Summary:	Greenwood (3812088)
County Summary:	Placer

Lat/Long:	38.94316 / -120.99038	**Accuracy:**	80 meters
UTM:	Zone-10 N4312389 E674162	**Elevation (ft):**	1400
PLSS:	T13N, R09E, Sec. 29, SE (M)	**Acres:**	0.0

Location:	ABOUT 0.5 MILE WEST OF GRIZZLY BEAR HOUSE ON FORESTHILL ROAD, SOUTH SIDE OF NORTH FORK AMERICAN RIVER.
Detailed Location:	MAPPED IN THE SE 1/4 OF THE SE 1/4 OF SECTION 29 ACCORDING TO COORDINATES PROVDED WITH 2013 POPP OBSERVATION.
Ecological:	FOREST.
General:	FEWER THAN 50 PLANTS OBSERVED IN 2013.
Owner/Manager:	USBOR

Lathyrus sulphureus var. argillaceus

Element Code: PDFAB25101

dubious pea

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G5T1T2Q
	State:	None		**State:**	S1S2
	Other:	Rare Plant Rank - 3			
Habitat:	**General:**	CISMONTANE WOODLAND, LOWER MONTANE CONIFEROUS FOREST, UPPER MONTANE CONIFEROUS FOREST.			
	Micro:	255-610 M.			

Occurrence No.	2	**Map Index:** 59351	**EO Index:**	80217	**Element Last Seen:** XXXX-XX-XX
Occ. Rank:	Unknown		**Presence:**	Presumed Extant	**Site Last Seen:** XXXX-XX-XX
Occ. Type:	Natural/Native occurrence		**Trend:**	Unknown	**Record Last Updated:** 2010-06-30

Quad Summary: Auburn (3812181)

County Summary: El Dorado, Placer

Lat/Long:	38.90211 / -121.07070	**Accuracy:**	1 mile
UTM:	Zone-10 N4307683 E667297	**Elevation (ft):**	
PLSS:	T12N, R08E, Sec. 10 (M)	**Acres:**	0.0

Location: AUBURN.

Detailed Location: EXACT LOCATION UNKNOWN. MAPPED BY CNDDB IN VICINITY OF AUBURN.

Ecological:

General: ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS AN UNDATED AMES COLLECTION. NEEDS FIELDWORK.

Owner/Manager: UNKNOWN

Occurrence No.	3	**Map Index:** 79238	**EO Index:**	80218	**Element Last Seen:** 1980-05-24
Occ. Rank:	Unknown		**Presence:**	Presumed Extant	**Site Last Seen:** 2001-04-XX
Occ. Type:	Natural/Native occurrence		**Trend:**	Unknown	**Record Last Updated:** 2010-06-30

Quad Summary: Lake Combie (3912111)

County Summary: Nevada

Lat/Long:	39.08818 / -121.12388	**Accuracy:**	1/10 mile
UTM:	Zone-10 N4328237 E662259	**Elevation (ft):**	
PLSS:	T14N, R08E, Sec. 06, SE (M)	**Acres:**	0.0

Location: JUNCTION OF LIME KILN RD AND WOLF RD, ABOUT 1 AIR MILE EAST OF HOG HILL.

Detailed Location: MAPPED BY CNDDB IN VICINITY OF THE JUNCTION IN THE SW 1/4 OF THE SW 1/4 OF SECTION 5 AND THE SE 1/4 OF THE SE 1/4 OF SECTION 6.

Ecological:

General: MAIN SOURCE OF INFORMATION FOR THIS SITE IS A "QUESTIONABLE" STERILE BROICH COLLECTION FROM 1980. SITE REVISITED IN 2001 BY HANES; AREA IS ALL PRIVATE LAND AND MOSTLY FENCED, AREA SEARCHED AS MUCH AS ACCESS ALLOWED BUT NO PLANTS FOUND.

Owner/Manager: PVT

Clarkia biloba ssp. brandegeeae

Element Code: PDONA05053

Brandegee's clarkia

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G4G5T4
	State:	None		**State:**	S4
	Other:	Rare Plant Rank - 4.2, BLM_S-Sensitive			
Habitat:	**General:**	CHAPARRAL, CISMONTANE WOODLAND, LOWER MONTANE CONIFEROUS FOREST.			
	Micro:	OFTEN IN ROADCUTS. 75-915 M.			

Occurrence No.	1	**Map Index:**	43396	**EO Index:**	43396	**Element Last Seen:**	2009-05-19
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2009-05-19
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2010-05-25

Quad Summary: Garden Valley (3812077), Coloma (3812078)

County Summary: El Dorado

Lat/Long:	38.78349 / -120.87686	**Accuracy:**	80 meters
UTM:	Zone-10 N4294892 E684414	**Elevation (ft):**	1150
PLSS:	T11N, R10E, Sec. 21, SW (M)	**Acres:**	0.0

Location: ABOUT 1 MILE SOUTH OF COLOMA ALONG WEST SIDE OF HIGHWAY 49.

Detailed Location: PLANTS ARE ON AN EAST-FACING CUT-BANK OF THE ROAD IN THE SW 1/4 OF THE SW 1/4 OF SECTION 21.

Ecological: GROWING ON E-FACING ROAD CUT UNDER GRAY PINE, CALIFORNIA BUCKEYE, YERBA SANTA, AND TOYON.

General: MORE THAN 1000 PLANTS OBSERVED IN 2009. 1947 COLLECTION BY LEWIS AND LEWIS FROM "1.7 MILES SOUTH OF COLOMA POST OFFICE" ALSO ATTRIBUTED HERE.

Owner/Manager: UNKNOWN

Occurrence No.	2	**Map Index:**	43397	**EO Index:**	43397	**Element Last Seen:**	2009-05-19
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2009-05-19
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2010-05-25

Quad Summary: Coloma (3812078)

County Summary: El Dorado

Lat/Long:	38.82852 / -120.97653	**Accuracy:**	80 meters
UTM:	Zone-10 N4299692 E675644	**Elevation (ft):**	800
PLSS:	T11N, R09E, Sec. 04, SE (M)	**Acres:**	0.0

Location: ALONG HIGHWAY 49 ABOUT 2 MILES EAST OF PILOT HILL.

Detailed Location: PLANTS ARE ON N-FACING CUT-BANK OF THE ROAD IN THE SW 1/4 OF THE SE 1/4 OF SECTION 4.

Ecological: GROWING ON A STEEP N-FACING ROAD CUT WITH ANNUAL GRASSES UNDER PONDEROSA PINE.

General: MORE THAN 1000 PLANTS OBSERVED IN 2009. 1947 COLLECTION BY LEWIS AND LEWIS FROM "2.3 MILES SOUTH OF PILOT HILL ALONG HWY 49" ALSO ATTRIBUTED HERE.

Owner/Manager: UNKNOWN

Occurrence No.	3	**Map Index:**	43398	**EO Index:**	43398	**Element Last Seen:**	XXXX-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	XXXX-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2010-05-25

Quad Summary: Coloma (3812078)

County Summary: El Dorado

Lat/Long:	38.82748 / -120.95932	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4299611 E677142	**Elevation (ft):**	900
PLSS:	T11N, R09E, Sec. 03, S (M)	**Acres:**	30.0

Location: 3.1 MILES SOUTH OF PILOT HILL ALONG HIGHWAY 49.

Detailed Location: EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDB ALONG HIGHWAY 49 AROUND 3.1 MILES EAST OF PILOT HILL.

Ecological:

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS AN UNDATED ANONYMOUS COLLECTION CITED BY LEWIS AND LEWIS IN "THE GENUS CLARKIA"; NEEDS FIELDWORK.

Owner/Manager: UNKNOWN

Occurrence No.	4	**Map Index:**	43399	**EO Index:**	43399	**Element Last Seen:**	2009-05-19
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2009-05-19
Occ. Type:	Natural/Native occurrence			**Trend:**	Increasing	**Record Last Updated:**	2010-06-14

Quad Summary: Clarksville (3812161), Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.75175 / -121.05054	**Accuracy:**	specific area
UTM:	Zone-10 N4291033 E669402	**Elevation (ft):**	560
PLSS:	T10N, R08E, Sec. 01, N (M)	**Acres:**	12.0

Location: FROM SWEETWATER OVERCROSSING WEST FOR ABOUT 0.25 MILE, ALONG SOUTH SIDE OF SALMON FALLS ROAD, EAST OF FOLSOM LAKE.

Detailed Location: NW POLY MAPPED ACCORDING TO A 2002 BURMESTER MAP. SE POLY MAPPED ACCORDING TO A 2007 JANEWAY & CASTRO COLLECTION FROM "125 METERS S OF SALMON FALLS RD ALONG LITTLE USED DIRT ROAD ON E SIDE OF SWEETWATER CREEK."

Ecological: NW POLY FOUND IN WEED INFESTED ROADFILL WITH CHONDRILLA JUNCEA, LACTUCA SERRIOLA, AND TORILIS NODOSA ADJACENT TO RIPARIAN AREA WITH AESCULUS CALIFORNICA, QUERCUS WISLIZENI, AND ALSO ON ROADCUT WITH LITTLE VEGETATION ADJACENT TO CHAPARRAL.

General: NW POLY: 500 EST IN 2002, >1000 IN '09. SE POLY: "COMMON" IN '07. 1947 COLL BY LEWIS FROM "PILOT HILLS-SALMON FALLS RD" & 3 1907-1908 BRANDEGEE COLLECTIONS FROM "SIMPSON'S RANCH, SWEETWATER RVR" ATTRIB HERE; UNABLE TO FIND SIMPSON'S RANCH.

Owner/Manager: UNKNOWN

Occurrence No.	5	**Map Index:**	43400	**EO Index:**	43400	**Element Last Seen:**	XXXX-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	XXXX-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2004-08-04

Quad Summary: Auburn (3812181)

County Summary: Placer

Lat/Long:	38.88109 / -121.11338	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4305273 E663644	**Elevation (ft):**	1000
PLSS:	T12N, R08E, Sec. 20 (M)	**Acres:**	35.8

Location: HIGHWAY 40, 1.1 MILES EAST OF NEWCASTLE.

Detailed Location: MAPPED AS BEST GUESS ALONG OPHIR ROAD (OLD HWY 40), 1.1 MILES EAST OF NEWCASTLE, ACCORDING TO INFORMATION PROVIDED BY B. ANDERSON.

Ecological:

General: SITE BASED ON AN UNDATED COLLECTION BY LEWIS AND LEWIS. ANDERSON HAS SEEN CLARKIAS ALONG THIS STRETCH OF ROAD, BUT AT AN UNKNOWN DATE.

Owner/Manager: UNKNOWN

Occurrence No.	6	**Map Index:**	43401	**EO Index:**	43401	**Element Last Seen:**	2004-06-12
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2004-06-12
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2005-05-03

Quad Summary:	Colfax (3912018)
County Summary:	Placer

Lat/Long:	39.09022 / -120.91930	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4328849 E679950	**Elevation (ft):**	
PLSS:	T14N, R09E, Sec. 01, SE (M)	**Acres:**	49.6

Location:	4 MILES EAST OF COLFAX.
Detailed Location:	MAPPED AS BEST GUESS 4 MI EAST ON IOWA HILL ROAD FROM HWY 80; EAST OF NORTH FORK AMERICAN RIVER NEAR WINDY POINT.
Ecological:	GROWING IN YELLOW PINE AND OAK BELT IN RED CLAY SOIL.
General:	ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1917 COLLECTION BY HELLER; NEEDS FIELDWORK.
Owner/Manager:	UNKNOWN

Occurrence No.	7	**Map Index:**	43404	**EO Index:**	43404	**Element Last Seen:**	2003-05-26
Occ. Rank:	Excellent			**Presence:**	Presumed Extant	**Site Last Seen:**	2003-05-26
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2004-08-05

Quad Summary:	Foresthill (3912017), Colfax (3912018)
County Summary:	Placer

Lat/Long:	39.04178 / -120.88849	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4323534 E682739	**Elevation (ft):**	1600
PLSS:	T14N, R10E, Sec. 19, S (M)	**Acres:**	246.6

Location:	ALONG YANKEE JIMS ROAD FROM NORTH FORK AMERICAN RIVER ABOUT 1 MILE WEST AND ABOUT 1.3 MILES EAST TO SHIRTTAIL CANYON RD.
Detailed Location:	ALONG HILLSIDE AND CUT BANK ADJACENT TO YANKEE JIM ROAD, EAST AND WEST OF THE NORTH FORK AMERICAN RIVER.
Ecological:	STEEP MOSS AND FERN COVERED ROAD CUT. QUERCUS CHRYSOLEPIS FOREST BURNED OVER IN 2001. MANY GRASSES AND FORBS.
General:	IN 1998 1000-2000 PLANTS WERE OBSERVED; PLANTS WERE ABUNDANT. 1 MILLION PLANTS SEEN IN 2003. A 1959 COLLECTION BY MOSQUIN FROM "7.7 MILES FROM FORESTHILL ON ROAD TO COLFAX" ATTRIBUTED TO THIS SITE.
Owner/Manager:	PVT, DPR

Occurrence No.	9	**Map Index:**	43411	**EO Index:**	43411	**Element Last Seen:**	1916-06-04
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1916-06-04
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2008-12-10

Quad Summary: Lake Combie (3912111)

County Summary: Nevada, Placer

Lat/Long:	39.01523 / -121.09552	**Accuracy:**	1 mile
UTM:	Zone-10 N4320192 E664883	**Elevation (ft):**	1400
PLSS:	T14N, R08E, Sec. 33 (M)	**Acres:**	0.0

Location: BEAR RIVER. WEST OF MCCARTHY FLAT, BOTH SIDES OF HIGHWAY 49, NEVADA COUNTY.

Detailed Location: LOCATION VAGUE: GIVEN AS "BEAR RIVER, NEVADA COUNTY, 1400 FEET". MAPPED AS BEST GUESS BY CNDDB ALONG THE BEAR RIVER WEST OF MCCARTHY FLAT ON BOTH SIDES OF HIGHWAY 49.

Ecological: UPPER SONORAN ZONE.

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1916 COLLECTION BY HALL; NEEDS FIELDWORK.

Owner/Manager: UNKNOWN

Occurrence No.	10	**Map Index:**	43413	**EO Index:**	43413	**Element Last Seen:**	XXXX-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	XXXX-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2000-08-14

Quad Summary: Wolf (3912112)

County Summary: Nevada

Lat/Long:	39.06087 / -121.15425	**Accuracy:**	2/5 mile
UTM:	Zone-10 N4325153 E659695	**Elevation (ft):**	1400
PLSS:	T14N, R07E, Sec. 14 (M)	**Acres:**	0.0

Location: 1 MILE WEST OF WOLF ON GARDEN BAR ROAD.

Detailed Location: MAPPED ABOUT 1 MILE SOUTHWEST OF PINE HILL, EAST OF CAMP FAR WEST RESERVOIR.

Ecological:

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1973 CHECKLIST OF PLANTS OCCURRING IN NEVADA COUNTY (TRUE); NEEDS FIELDWORK.

Owner/Manager: UNKNOWN

Occurrence No.	26	**Map Index:**	56255	**EO Index:**	56271	**Element Last Seen:**	2002-06-19
Occ. Rank:	Excellent			**Presence:**	Presumed Extant	**Site Last Seen:**	2002-06-19
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2004-07-29

Quad Summary: Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.76136 / -121.00794	**Accuracy:**	80 meters
UTM:	Zone-10 N4292179 E673081	**Elevation (ft):**	740
PLSS:	T11N, R09E, Sec. 31, SE (M)	**Acres:**	0.0

Location: SOUTH FORK AMERICAN RIVER, JUST DOWNSTREAM FROM CONFLUENCE OF WEBER CREEK, EAST OF PINE HILL PRESERVE.

Detailed Location: MOSTLY ON ROAD CUT ABOVE DIRT ROAD ON THE WAY TO WEBER CREEK.

Ecological: FOOTHILL PINE SERIES, WITH PINUS SABINIANA, QUERCUS KELLOGII, Q. WISLIZENI, AESCULUS CALIFORNICA, AND TOXICODENDRON. GROWING IN OPENING ON CUT SLOPE ABOVE DIRT ROAD.

General: 200 PLANTS SEEN IN 2002.

Owner/Manager: BLM

Occurrence No.	27	**Map Index:**	56256	**EO Index:**	56272	**Element Last Seen:**	2006-06-14
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2006-06-14
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2007-08-28

Quad Summary:	Greenwood (3812088), Auburn (3812181)
County Summary:	Placer

Lat/Long:	38.93560 / -121.01927	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4311496 E671677	**Elevation (ft):**	1300
PLSS:	T13N, R09E, Sec. 31 (M)	**Acres:**	219.7

Location:	ALONG LAKE CLEMENTINE RD MOSTLY BEFORE LAKE CLEMENTINE TRAIL, SOUTH OF LAKE CLEMENTINE ALONG THE N. FORK AMERICAN RIVER.
Detailed Location:	
Ecological:	MIXED CONIFER FOREST. ROADSIDE GRASSY CLEARINGS WITH PHILADELPHUS LEWISII, QUERCUS CHRYSOLEPIS, STYRAX OFFICIANALIS, CEANOTHUS SPP.
General:	ABOUT 30 PLANTS ESTIMATED IN 2004. POLYGON SUPPLIED SEEMS TOO LONG TO ONLY ACCOMODATE 30 PLANTS. NEEDS FIELDWORK TO PIN DOWN COLONIES. A 1973 YUNGERT COLLECTION AND A 2006 HELMKAMP COLLECTION ALSO ATTRIBUTED TO THIS OCCURRENCE.
Owner/Manager:	STATE

Occurrence No.	28	**Map Index:**	56257	**EO Index:**	56273	**Element Last Seen:**	2003-06-20
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2003-06-20
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2004-07-30

Quad Summary:	Colfax (3912018)
County Summary:	Placer

Lat/Long:	39.06487 / -120.94692	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4325982 E677624	**Elevation (ft):**	2000
PLSS:	T14N, R09E, Sec. 14, W (M)	**Acres:**	77.0

Location:	ALONG CANYON WAY FROM YANKEE JIMS ROAD TO 0.3 MILE NORTH, AND ALONG YANKEE JIMS ROAD SOUTH FOR 1.3 MILES.
Detailed Location:	ROAD CUT BANKS IN SUNNY LOCATIONS.
Ecological:	ROAD CUT BANKS.
General:	10,000 PLANTS SEEN IN 2003.
Owner/Manager:	PVT

Occurrence No.	43	**Map Index:**	61079	**EO Index:**	61115	**Element Last Seen:**	2006-06-14
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2006-06-14
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2010-05-25

Quad Summary: Greenwood (3812088)

County Summary: Placer

Lat/Long:	38.96605 / -120.97436	**Accuracy:**	specific area
UTM:	Zone-10 N4314960 E675494	**Elevation (ft):**	1000
PLSS:	T13N, R09E, Sec. 21, NE (M)	**Acres:**	4.0

Location: EAST SIDE OF NORTH FORK LAKE, 0.5 MILE SOUTHWEST OF LONG POINT.

Detailed Location: CANYON SLOPE ABOVE NORTH FORK AMERICAN RIVER. MAPPED AS 5 POLYGONS BY CNDDB ACCORDING TO A 2004 YOUNG MAP AND A 2006 DEAN MAP. MOSTLY IN THE S1/2 OF THE NE1/4 SEC 21.

Ecological: SURROUNDING HABITAT IS A MIXTURE OF PINE/OAK WOODLAND AND CHAPARRAL W/ SOME MIXED EVERGREEN FOREST IN MOIST AREAS. ASSOCIATES SPECIES ON ROAD CUT INCLUDE PENTAGRAMMA TRIANGULARIS, TORILIS ARVENSIS, CYNOSURUS ECHINATUS, BROMUS DIANDRUS, ETC.

General: 2 INDIVIDUALS OBSERVED IN 2004 IN S-MOST POLY. THE 4 N-MOST POLYS HAD 300 PLANTS IN MAY OF 2006, 500 PLANTS SEEN IN SAME GENERAL AREA IN JUNE OF 2006.

Owner/Manager: UNKNOWN

Occurrence No.	46	**Map Index:**	61207	**EO Index:**	61243	**Element Last Seen:**	2004-06-12
Occ. Rank:	Excellent			**Presence:**	Presumed Extant	**Site Last Seen:**	2004-06-12
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2010-05-25

Quad Summary: Colfax (3912018)

County Summary: Placer

Lat/Long:	39.09589 / -120.93898	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4329440 E678234	**Elevation (ft):**	1800
PLSS:	T14N, R09E, Sec. 02, E (M)	**Acres:**	64.9

Location: ABOUT 0.7 MILE EAST OF COLFAX ALONG IOWA HILL ROAD.

Detailed Location: ABOUT 1 MILE EAST FROM JUNCTION OF IOWA HILL RD AND CANYON WAY TO ABOUT 2 MILES EAST OF JUNCTION. MAPPED IN THE E 1/2 OF SECTION 2.

Ecological: ROADSIDES AND OUTCROPS IN LOWER CONIFEROUS FOREST. FOUND WITH PSEUDOTSUGA MENZIESII, QUERCUS WISLIZENI, AESCULUS CALIFORNICA, SEDUM SPATHULIFOLIUM, CLARKIA PURPUREA SSP. VIMINEA, CLARKIA UNGUICULATA, AND MELICA CALIFORNICA.

General: 100'S OF PLANTS OBSERVED IN 2004.

Owner/Manager: UNKNOWN

Occurrence No.	48	**Map Index:**	65011	**EO Index:**	65090	**Element Last Seen:**	2005-06-16
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2005-06-16
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2007-08-28

Quad Summary: Lake Combie (3912111), Grass Valley (3912121)

County Summary: Nevada

Lat/Long:	39.12255 / -121.02809	**Accuracy:**	specific area
UTM:	Zone-10 N4332228 E670462	**Elevation (ft):**	1656
PLSS:	T15N, R09E, Sec. 30, SW (M)	**Acres:**	13.2

Location: CLOVER VALLEY ROAD, ALTA SIERRA SUBDIVISION.

Detailed Location: MAPPED AT TWO LOCATIONS ALONG CLOVER VALLEY ROAD IN THE SW 1/4 OF SECTION 30 AND THE NE 1/4 OF SECTION 25.

Ecological: TYPICAL HABITAT OF OPEN, EXPOSED SLOPES AND ROAD BANKS/CUTS.

General: OVER 1,000 PLANTS SEEN IN 2005.

Owner/Manager: UNKNOWN

Occurrence No.	49	**Map Index:**	65012	**EO Index:**	65091	**Element Last Seen:**	2005-06-16
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2005-06-16
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2007-08-27

Quad Summary: Lake Combie (3912111)

County Summary: Nevada

Lat/Long:	39.11553 / -121.04005	**Accuracy:**	80 meters
UTM:	Zone-10 N4331426 E669445	**Elevation (ft):**	1594
PLSS:	T15N, R08E, Sec. 36, NW (M)	**Acres:**	0.0

Location: ALONG WEST SIDE OF BREWER ROAD, ALTA SIERRA SUBDIVISION.

Detailed Location: MAPPED JUST WEST OF ROAD, ABOUT 0.21 MILE SOUTH OF ALTA SIERRA SCHOOL ON TOPO MAP.

Ecological: TYPICAL HABITAT, GROWING ALONG ROAD BANK IN RED CLAY SOILS.

General: APPROXIMATELY 150 PLANTS SEEN IN 2005.

Owner/Manager: UNKNOWN

Occurrence No.	61	**Map Index:**	59351	**EO Index:**	65132	**Element Last Seen:**	1928-06-12
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1928-06-12
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2006-07-21

Quad Summary: Auburn (3812181)

County Summary: El Dorado, Placer

Lat/Long:	38.90211 / -121.07070	**Accuracy:**	1 mile
UTM:	Zone-10 N4307683 E667297	**Elevation (ft):**	1000
PLSS:	T12N, R08E, Sec. 10 (M)	**Acres:**	0.0

Location: AUBURN.

Detailed Location: EXACT LOCATION UNKNOWN; MAPPED AS BEST GUESS BY CNDDB IN THE VICINITY OF THE AUBURN POST OFFICE.

Ecological: IN CHAPARRAL.

General: A 1928 KECK COLLECTION IS THE ONLY SOURCE FOR THIS SITE. NEEDS FIELDWORK.

Owner/Manager: UNKNOWN

Occurrence No.	62	**Map Index:**	65061	**EO Index:**	65140	**Element Last Seen:**	1933-05-06
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1933-05-06
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2006-07-11

Quad Summary:	Rocklin (3812172), Gold Hill (3812182)
County Summary:	Placer

Lat/Long:	38.87639 / -121.14465	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4304695 E660943	**Elevation (ft):**	600
PLSS:	T12N, R07E, Sec. 24 (M)	**Acres:**	634.6

Location:	NEAR NEWCASTLE.
Detailed Location:	EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDB WITHIN T12N R7E SECTION 24. COLLECTOR PROBABLY LISTED R8E INCORRECTLY.
Ecological:	
General:	A 1933 CLAR COLLECTION IS THE ONLY SOURCE FOR THIS SITE. NEEDS FIELDWORK.
Owner/Manager:	UNKNOWN

Occurrence No.	64	**Map Index:**	69810	**EO Index:**	70632	**Element Last Seen:**	2007-04-01
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2007-04-01
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2008-12-10

Quad Summary:	Lake Combie (3912111)
County Summary:	Nevada

Lat/Long:	39.10477 / -121.04003	**Accuracy:**	specific area
UTM:	Zone-10 N4330232 E669473	**Elevation (ft):**	1700
PLSS:	T15N, R08E, Sec. 36, SW (M)	**Acres:**	1.0

Location:	ALONG WOLF CREEK RD, 0.3 ROAD MILE EAST OF BREWER RD, 0.9 AIR MILE SOUTH OF ALTA SIERRA SCHOOL.
Detailed Location:	MAPPED BY CNDDB IN THE SE 1/4 OF THE SW 1/4 OF SECTION 36 ACCORDING TO A 2006 MORAN MAP.
Ecological:	NEXT TO ROAD AND ON SLOPE ABOVE ROAD. NON-NATIVE GRASSLAND W/NATIVE AND NON-NATIVE HERBS. THIS AREA IS SPRAYED WITH HERBICIDES FOR FIRE SAFETY BY NEVADA COUNTY AND PLANT COULD BE EXTIRPATED FROM THIS SITE.
General:	APPROXIMATELY 75-100 PLANTS OBSERVED IN 2006. UNKNOWN NUMBER OF PLANTS SEEN IN 2007.
Owner/Manager:	PVT

Occurrence No.	73	**Map Index:**	70886	**EO Index:**	71863	**Element Last Seen:**	2008-06-04
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2008-06-04
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2010-06-15

Quad Summary: Colfax (3912018), Chicago Park (3912028)

County Summary: Placer

Lat/Long:	39.11624 / -120.94151	**Accuracy:**	specific area
UTM:	Zone-10 N4331693 E677963	**Elevation (ft):**	2300
PLSS:	T15N, R09E, Sec. 26 (M)	**Acres:**	24.0

Location: ON BOTH SIDES OF INTERSTATE 80, FROM 0.65 TO 1.65 AIR MILES NORTHEAST OF COLFAX.

Detailed Location: MAPPED BY CNDDB AS 12 COLONIES. 7 NORTHERN COLONIES ALONG ROADWAYS IN THE VICINITY OF THE LONG RAVINE RAILROAD CROSSING MAPPED ACCORDING TO 2007 HILLAIRE MAP. 5 SOUTHERN COLONIES MAPPED ACCORDING TO A 2008 FRANKLIN MAP.

Ecological: ALONG ROADCUTS AND IN OPEN DRY AREAS. ASSOC WITH PINUS PONDEROSA, QUERCUS KELLOGGII, PSEUDOTSUGA MENZIESII, ARCTOSTAPHYLOS MANZANITA, CEANOTHUS CUNEATUS, TOXICODENDRON DIVERSILOBUM, COLLINSIA TINCTORIA, BROMUS RUBENS, B. HORDEACEUS, ETC.

General: POPULATION NUMBERS OBSERVED IN 2007 RELATIVE TO I-80 AND THE LONG RAVINE CROSSING: ~350 PLANTS ON THE NW, ~650 ON THE NE, ~275 ON THE SW, AND 180 PLANTS ON THE SE. 2008: >500 PLANTS TOTAL OBSERVED BETWEEN 5 SOUTHERN COLONIES AND EO #92.

Owner/Manager: CALTRANS ROW, UNKNOWN

Occurrence No.	76	**Map Index:**	73124	**EO Index:**	74055	**Element Last Seen:**	2008-05-22
Occ. Rank:	Fair			**Presence:**	Presumed Extant	**Site Last Seen:**	2008-05-22
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2008-12-15

Quad Summary: Coloma (3812078)

County Summary: El Dorado

Lat/Long:	38.82083 / -120.94636	**Accuracy:**	80 meters
UTM:	Zone-10 N4298897 E678284	**Elevation (ft):**	660
PLSS:	T11N, R09E, Sec. 11, NW (M)	**Acres:**	0.0

Location: BETWEEN CLARK MOUNTAIN RD & THE SOUTH FORK AMERICAN RIVER, NE OF CLARK MTN.

Detailed Location: MAPPED BY CNNDB IN THE NW1/4 OF SECTION 11 ACCORDING TO A 2008 WILLSON MAP.

Ecological: VALLEY-FOOTHILL RIPARIAN PLANT COMMUNITY ON PLACER DIGGINGS SOIL (RIVER RUBBLE). PLANTS WERE ON E SIDE OF SHADING SALIX EXIGUA OR BENEATH QUERCUS LOBATA.

General: 4 PLANTS SEEN BETWEEN THIS SITE AND EO #77 IN 2008.

Owner/Manager: PVT

Occurrence No.	77	**Map Index:**	73125	**EO Index:**	74056	**Element Last Seen:**	2008-05-22
Occ. Rank:	Fair			**Presence:**	Presumed Extant	**Site Last Seen:**	2008-05-22
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2008-12-15

Quad Summary: Coloma (3812078)

County Summary: El Dorado

Lat/Long:	38.82486 / -120.94222	**Accuracy:**	80 meters
UTM:	Zone-10 N4299353 E678632	**Elevation (ft):**	660
PLSS:	T11N, R09E, Sec. 11, N (M)	**Acres:**	0.0

Location: NE SIDE OF PETERSON LANE ALONG THE S SIDE OF THE SOUTH FORK AMERICAN RIVER, NE OF CLARK MTN.

Detailed Location: MAPPED BY CNNDB IN THE NW1/4 OF SECTION 11 ACCORDING TO A 2008 WILLSON MAP.

Ecological: VALLEY-FOOTHILL RIPARIAN PLANT COMMUNITY ON PLACER DIGGINGS SOIL (RIVER RUBBLE). PLANTS WERE ON E SIDE OF SHADING SALIX EXIGUA OR BENEATH QUERCUS LOBATA.

General: 4 PLANTS SEEN BETWEEN THIS SITE AND EO #76 IN 2008.

Owner/Manager: PVT

Occurrence No.	82	**Map Index:**	78901	**EO Index:**	79882	**Element Last Seen:**	2009-05-19
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2009-05-19
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2010-05-25

Quad Summary: Coloma (3812078)

County Summary: El Dorado

Lat/Long:	38.79368 / -120.88437	**Accuracy:**	80 meters
UTM:	Zone-10 N4296007 E683735	**Elevation (ft):**	1000
PLSS:	T11N, R10E, Sec. 20, NE (M)	**Acres:**	0.0

Location: ABOUT 0.5 MILE SOUTH OF COLOMA ALONG BOTH SIDES OF HIGHWAY 49.

Detailed Location: PLANTS ARE ON CUT-BANKS OF THE ROAD IN THE W 1/2 OF THE NE 1/4 OF SECTION 20.

Ecological: GROWING ON ROAD CUT WITH MELICA AND ANNUAL GRASSES UNDER BLACK OAK, INTERIOR LIVE OAK, AND TOYON.

General: MORE THAN 1000 PLANTS OBSERVED IN 2009.

Owner/Manager: UNKNOWN

Occurrence No.	83	**Map Index:**	79021	**EO Index:**	79885	**Element Last Seen:**	2009-05-25
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2009-05-25
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2010-06-09

Quad Summary: Pilot Hill (3812171)

County Summary: Placer

Lat/Long:	38.83398 / -121.09160	**Accuracy:**	80 meters
UTM:	Zone-10 N4300084 E665643	**Elevation (ft):**	471
PLSS:	T11N, R08E, Sec. 04 (M)	**Acres:**	0.0

Location: ALONG WEST SIDE OF ACCESS ROAD TO NEWCASTLE POWERHOUSE ADJACENT TO FOLSOM LAKE, ~1.5 AIR MILES SSE OF SCOTTS CORNER.

Detailed Location: MAPPED IN THE SE 1/4 OF THE NW 1/4 OF SECTION 4 ACCORDING TO 2009 KENT UTM COORDINATES.

Ecological: FOOTHILL WOODLAND. WEST SIDE OF ACCESS ROAD BANK ON DECOMPOSED GRANITE ON E-FACING 80 DEG SLOPE. ASSOC W/ PINUS SABINIANA, QUERCUS WISLIZENI, Q. KELLOGGII, HETEROMELES ARBUTIFOLIA, AESCULUS CALIFORNICA, TOXICODENDRON DIVERSILOBUM, ETC.

General: MORE THAN 5000 PLANTS OBSERVED IN 2009.

Owner/Manager: USBOR

Occurrence No.	84	**Map Index:**	78905	**EO Index:**	79887	**Element Last Seen:**	2009-06-15
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2009-06-15
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2010-05-25

Quad Summary: Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.83948 / -121.03854	**Accuracy:**	specific area
UTM:	Zone-10 N4300792 E670235	**Elevation (ft):**	1050
PLSS:	T11N, R08E, Sec. 01, NW (M)	**Acres:**	28.0

Location: ABOUT 1 MILE WEST OF COMMUNITY OF PILOT HILL ALONG RATTLESNAKE BAR ROAD.

Detailed Location: PLANTS ARE MOSTLY ON THE SOUTH SIDE OF THE ROAD, BUT SOME ARE ON THE NORTH SIDE AS WELL. ALL PLANTS ARE ON THE ROAD BANKS. MAPPED IN THE N 1/2 OF THE NW 1/4 OF SECTION 1.

Ecological: GROWING ON ROAD BANK WITH SPARSE COVER OF GRASSES AND FORBS UNDER BLUE OAK AND GRAY PINE.

General: MORE THAN 1000 PLANTS OBSERVED IN 2009.

Owner/Manager: UNKNOWN

Occurrence No.	85	**Map Index:**	78908	**EO Index:**	79888	**Element Last Seen:**	2009-06-15
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2009-06-15
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2010-05-26

Quad Summary: Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.81245 / -121.06816	**Accuracy:**	specific area
UTM:	Zone-10 N4297737 E667728	**Elevation (ft):**	925
PLSS:	T11N, R08E, Sec. 10, SE (M)	**Acres:**	11.0

Location: ALONG RATTLESNAKE BAR ROAD, ABOUT 3.3 AIR MILES SOUTHWEST OF COMMUNITY OF PILOT HILL.

Detailed Location: PLANTS ARE MOSTLY ON THE CUT-BANKS OF THE SOUTH SIDE OF THE ROAD. MAPPED IN THE SW 1/4 OF THE SE 1/4 OF SECTION 10.

Ecological: GROWING ON ROAD BANK WITH SPARSE COVER OF GRASSES AND FORBS UNDER BLUE OAK AND GRAY PINE.

General: MORE THAN 1000 PLANTS OBSERVED IN 2009.

Owner/Manager: UNKNOWN

Occurrence No.	86	**Map Index:**	78909	**EO Index:**	79889	**Element Last Seen:**	2009-06-15
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2009-06-15
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2010-05-26

Quad Summary:	Pilot Hill (3812171)
County Summary:	El Dorado

Lat/Long:	38.77706 / -121.03496	**Accuracy:**	80 meters
UTM:	Zone-10 N4293871 E670695	**Elevation (ft):**	650
PLSS:	T11N, R08E, Sec. 25, NE (M)	**Acres:**	0.0

Location:	SKUNK CANYON; JUST NORTH OF THE AMERICAN RIVER ALONG SALMON FALLS ROAD, ABOUT 2.6 AIR MILES NORTHWEST OF MORMON HILL.
Detailed Location:	PLANTS ARE ON A VERY STEEP ROCKY EAST-FACING CUT-BANK OF THE ROAD. MAPPED IN THE SW 1/4 OF THE NE 1/4 OF SECTION 25, VERY CLOSE TO CENTER OF SEC 25.
Ecological:	GROWING ON STEEP ROCKY CUT-BANK OF ROAD WITH SPARSE COVER OF GRASSES, FORBS, SCATTERED BUSH MONKEY FLOWER AND POISON OAK UNDER INTERIOR LIVE OAK AND GRAY PINE.
General:	MORE THAN 1000 PLANTS OBSERVED IN 2009.
Owner/Manager:	UNKNOWN

Occurrence No.	87	**Map Index:**	78914	**EO Index:**	79891	**Element Last Seen:**	2009-06-07
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2009-06-07
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2010-05-26

Quad Summary:	Greenwood (3812088)
County Summary:	Placer

Lat/Long:	38.94128 / -120.93948	**Accuracy:**	80 meters
UTM:	Zone-10 N4312279 E678578	**Elevation (ft):**	800
PLSS:	T13N, R09E, Sec. 35, NE (M)	**Acres:**	0.0

Location:	WEST SIDE MIDDLE FORK AMERICAN RIVER, ABOUT 0.7 AIR MILE WEST OF FRENCH HILL.
Detailed Location:	FOUND ALONG WESTERN STATES TRAIL IN A REMOTE SECTION NORTH OF POVERTY BAR, IN OPEN AREA. MAPPED IN THE NW 1/4 OF THE NE 1/4 OF SECTION 35.
Ecological:	ASSOCIATED WITH QUERCUS WISLIZENI, Q. CHRYSOLEPIS, PINUS SABINIANA, AESCULUS CALIFORNICA, AND MANY GRASSES. EAST ASPECT.
General:	100 PLANTS OBSERVED IN 2009.
Owner/Manager:	USBOR

Occurrence No.	88	**Map Index:**	78918	**EO Index:**	79892	**Element Last Seen:**	2009-06-01
Occ. Rank:	Fair			**Presence:**	Presumed Extant	**Site Last Seen:**	2009-06-01
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2010-06-09

Quad Summary:	Auburn (3812181)
County Summary:	Placer

Lat/Long:	38.98675 / -121.01290	**Accuracy:**	80 meters
UTM:	Zone-10 N4317184 E672105	**Elevation (ft):**	1850
PLSS:	T13N, R09E, Sec. 07, SE (M)	**Acres:**	0.0

Location:	BETWEEN I-80 AND MEADOW VISTA, ABOUT 0.75 AIR MILE NORTH OF LAKE THEODORE.
Detailed Location:	ABOUT 3000 SQ FT AREA WITHIN ABOUT 40 FT OF BEAR RIVER CANAL. MAPPED ACCORDING TO 2009 KENT UTM COORDINATES IN THE SW 1/4 OF THE SE 1/4 OF SECTION 7.
Ecological:	SMALL BLUE OAK WOODLAND WITHIN MIXED CONIFEROUS FOREST. NW SLOPE WITH NON-NATIVE AND NATIVE GRASSES, BLUE OAK, GRAY PINE, CEANOTHUS SPP., CALIFORNIA BUCKEYE, AND MANZANITA; 35-60 DEG SLOPE.
General:	50-100 PLANTS OBSERVED IN 2009.
Owner/Manager:	PVT

Occurrence No.	89	**Map Index:**	78921	**EO Index:**	79894	**Element Last Seen:**	2009-06-15
Occ. Rank:	Excellent			**Presence:**	Presumed Extant	**Site Last Seen:**	2009-06-15
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2010-05-26

Quad Summary:	Auburn (3812181)
County Summary:	El Dorado

Lat/Long:	38.91033 / -121.02857	**Accuracy:**	specific area
UTM:	Zone-10 N4308673 E670931	**Elevation (ft):**	800
PLSS:	T12N, R08E, Sec. 12, N (M)	**Acres:**	107.0

Location:	EAST OF AUBURN ALONG HWY 49, FROM 1.6 TO 3.3 ROAD MILES NORTH OF COOL.
Detailed Location:	PLANTS ARE MOSTLY ON THE NORTH AND EAST-FACING BANKS OF THE HIGHWAY; MORE OR LESS A CONTINUOUS POPULATION. MAPPED ALONG THE HIGHWAY IN THE NW 1/4 OF SECTION 7, N 1/2 OF SECTION 12, AND THE SW 1/4 OF SECTION 1.
Ecological:	GROWING ON ROAD BANKS OF HIGHWAY TYPICALLY WITH SPARSE COVER OF GRASSES AND OCCASIONAL SHRUBS. TOP OF BANK VEGETATED WITH MIXED CONIFER HARDWOOD. ASSOCIATED WITH INTERIOR LIVE OAK, PONDEROSA PINE, BLACK OAK, MANZANITA, POISON OAK, ETC.
General:	10,000'S OF PLANTS OBSERVED IN 2009.
Owner/Manager:	USBOR, UNKNOWN

Occurrence No.	90	**Map Index:**	78923	**EO Index:**	79895	**Element Last Seen:**	2009-06-15
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2009-06-15
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2010-05-26

Quad Summary:	Auburn (3812181)
County Summary:	El Dorado

Lat/Long:	38.89461 / -121.01596	**Accuracy:**	80 meters
UTM:	Zone-10 N4306953 E672062	**Elevation (ft):**	1410
PLSS:	T12N, R09E, Sec. 18, NE (M)	**Acres:**	0.0

Location:	ABOUT 0.5 MILE NORTH OF COOL ALONG HIGHWAY 49.
Detailed Location:	PLANTS ARE ON EAST-FACING BANKS OF THE HIGHWAY. MAPPED IN THE SW 1/4 OF THE NE 1/4 OF SECTION 18.
Ecological:	GROWING ON ROAD BANK OF HIGHWAY WITH SPARSE COVER OF GRASSES AND FORBS UNDER INTERIOR LIVE OAKS.
General:	MORE THAN 100 PLANTS OBSERVED IN 2009.
Owner/Manager:	UNKNOWN

Occurrence No.	91	**Map Index:**	78930	**EO Index:**	79896	**Element Last Seen:**	2005-06-23
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2005-06-23
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2010-05-26

Quad Summary:	Gold Hill (3812182)
County Summary:	Placer

Lat/Long:	38.96463 / -121.17178	**Accuracy:**	specific area
UTM:	Zone-10 N4314441 E658393	**Elevation (ft):**	700
PLSS:	T13N, R07E, Sec. 23, NW (M)	**Acres:**	15.0

Location:	VICINITY OF COON CREEK AND DEADMAN CANAL, ABOUT 1.5 AIR MILES SSW OF BIG HILL.
Detailed Location:	THREE COLONIES MAPPED ACCORDING TO 2005 UTM COORDINATES IN THE W 1/2 OF THE NW 1/4 OF SECTION 23 AND THE S 1/2 OF THE NE 1/4 OF SECTION 22.
Ecological:	OAK WOODLAND, PARTIALLY WEEDY UNDERSTORY AND PARTIALLY DENSE HETEROMELES ARBUTIFOLIA UNDERSTORY. ASSOC W/ QUERCUS WISLIZENI, Q. DOUGLASII, CYNOSURUS ECHINATUS, TOXICODENDRON DIVERSILOBUM, TORILIS ARVENSIS, BROMUS HORDEACEUS, ETC.
General:	UNKNOWN NUMBER OF PLANTS OBSERVED IN 2005.
Owner/Manager:	PVT

Occurrence No.	92	**Map Index:**	78933	**EO Index:**	79897	**Element Last Seen:**	2008-06-04
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2008-06-04
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2010-06-15

Quad Summary:	Colfax (3912018)
County Summary:	Placer

Lat/Long:	39.10401 / -120.92902	**Accuracy:**	specific area
UTM:	Zone-10 N4330360 E679074	**Elevation (ft):**	1600
PLSS:	T15N, R09E, Sec. 36, SW (M)	**Acres:**	1.0

Location:	EAST SIDE OF BURNT FLAT, ABOUT 1.2 AIR MILES NNW OF WINDY POINT.
Detailed Location:	MAPPED IN THE SW 1/4 OF THE SW 1/4 OF SECTION 36.
Ecological:	OPENING IN BLUE OAK AND CANYON LIVE OAK/BLACK OAK WOODLAND.
General:	2008: MORE THAN 500 PLANTS TOTAL OBSERVED BETWEEN THIS OCCURRENCE AND THE SOUTHERN HALF OF EO #73.
Owner/Manager:	BLM

Occurrence No.	93	**Map Index:**	78936	**EO Index:**	79898	**Element Last Seen:**	2009-05-27
Occ. Rank:	Poor			**Presence:**	Presumed Extant	**Site Last Seen:**	2009-05-27
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2010-05-26

Quad Summary:	Colfax (3912018)
County Summary:	Placer

Lat/Long:	39.11299 / -120.97060	**Accuracy:**	80 meters
UTM:	Zone-10 N4331277 E675456	**Elevation (ft):**	2200
PLSS:	T15N, R09E, Sec. 33, NE (M)	**Acres:**	0.0

Location:	PG&E ACCESS ROAD OFF OF BEAR VIEW DRIVE, ABOUT 1 AIR MILE NORTHWEST OF COLFAX.
Detailed Location:	MAPPED IN THE NE 1/4 OF THE NE 1/4 OF SECTION 33.
Ecological:	GROWING IN OPEN CUT BANK ABOVE ROAD UNDER BLACK OAK/INCENSE CEDAR CANOPY WITH RHAMNUS TOMENTELLA, POISON OAK, VICIA SATIVA, TORILIS ARVENSIS, MEDICAGO SP., TRIFOLIUM HIRTUM, COLLOMIA HETEROPHYLLA, AND ANNUAL EXOTIC GRASSES.
General:	25-52 PLANTS OBSERVED IN 2009.
Owner/Manager:	PVT

Occurrence No.	94	**Map Index:**	78939	**EO Index:**	79900	**Element Last Seen:**	2009-06-09
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2009-06-09
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2010-06-14

Quad Summary:	Colfax (3912018)
County Summary:	Placer

Lat/Long:	39.08746 / -120.98688	**Accuracy:**	specific area
UTM:	Zone-10 N4328411 E674111	**Elevation (ft):**	2000
PLSS:	T14N, R09E, Sec. 04, W (M)	**Acres:**	154.0

Location:	ALONG BEAR RIVER CANAL AND ACCESS ROADS, FROM ABOUT 0.1 TO 3 AIR MILES SOUTH OF TAYLOR CROSSING.
Detailed Location:	SEVERAL COLONIES MAPPED BY CNDDB AS 19 POLYGONS ACCORDING TO 2009 KENT UTM COORDINATES IN THE SW 1/4 SECTION 33, W 1/2 SECTION 4, NW 1/4 SECTION 9, E 1/2 SECTION 8, AND NE 1/4 SECTION 17.
Ecological:	ON SLOPES WITH VARIOUS ASPECTS; SERPENTINE & DECOMPOSED METAMORPHIC ROCK SOILS. FOUND ON ROCKY OUTCROPS, OPEN STANDS, ROAD CUT BANKS, GRASSY OPENINGS, & DRAINAGES. DOMINANT SPECIES: INTERIOR LIVE OAK, GRAY PINE, BAY LAUREL, GRASSES, ETC.
General:	2009: NUMBER OF PLANTS SEEN PER COLONY RANGED FROM 7 TO 5000 INDIVIDUALS, WITH OVER 14,000 TOTAL PLANTS OBSERVED.
Owner/Manager:	PVT-PGE, PVT

Occurrence No.	95	**Map Index:**	78940	**EO Index:**	79901	**Element Last Seen:**	2009-06-19
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2009-06-19
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2010-05-26

Quad Summary: Lake Combie (3912111)

County Summary: Nevada

Lat/Long:	39.05790 / -121.09033	**Accuracy:**	80 meters
UTM:	Zone-10 N4324937 E665232	**Elevation (ft):**	1300
PLSS:	T14N, R08E, Sec. 21, NE (M)	**Acres:**	0.0

Location: ALONG THE EAST SIDE OF HIGHWAY 49 BETWEEN AUBURN AND GRASS VALLEY, ABOUT 1 AIR MILE NORTHWEST OF BEAR RIVER HIGH SCHOOL.

Detailed Location: JUST SOUTH OF WOLF CREEK. MAPPED IN THE APPROXIMATE NW 1/4 OF THE NE 1/4 OF SECTION 21.

Ecological: PLANTS ARE GROWING AT BASE OF GRASSY ROAD BANK ON THE EAST SIDE OF THE HIGHWAY.

General: 100'S OF PLANTS OBSERVED IN 2009.

Owner/Manager: UNKNOWN

Ceanothus roderickii

Element Code: PDRHA04190

Pine Hill ceanothus

Listing Status:	**Federal:**	Endangered	**CNDDB Element Ranks:**	**Global:**	G1
	State:	Rare		**State:**	S1
	Other:	Rare Plant Rank - 1B.1, SB_RSABG-Rancho Santa Ana Botanic Garden, SB_SBBG-Santa Barbara Botanic Garden			
Habitat:	**General:**	CHAPARRAL, CISMONTANE WOODLAND.			
	Micro:	GABBROIC OR SERPENTINE SOILS; OFTEN IN "HISTORICALLY DISTURBED" AREAS WITH AN ENSEMBLE OF OTHER RARE PLANTS. 260-630 M.			

Occurrence No.	5	**Map Index:**	12162	**EO Index:**	4345	**Element Last Seen:**	2017-04-02
Occ. Rank:	Excellent			**Presence:**	Presumed Extant	**Site Last Seen:**	2017-04-02
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2019-03-26

Quad Summary: Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.76355 / -121.02545	**Accuracy:**	specific area
UTM:	Zone-10 N4292389 E671554	**Elevation (ft):**	950
PLSS:	T11N, R09E, Sec. 31 (M)	**Acres:**	464.0

Location: N & S OF SOUTH FORK AMERICAN RIVER, MOSTLY BETWEEN SALMON FALLS ROAD & WEBER CREEK, EAST OF FOLSOM LAKE.

Detailed Location: SOME INFORMATION USED FOR MAPPING WAS FOR MULTIPLE RARE PLANTS AND C. RODERICKII MAY NOT BE PRESENT THROUGHOUT EACH POLYGON.

Ecological: ON RESCUE GABBROIC SOILS IN CHAPARRAL. ASSOCIATED WITH WYETHIA RETICULATA, CALYSTEGIA STEBBINSII, CHLOROGALUM GRANDIFLORUM AND HELIANTHEMUM SUFFRUTESCENS. OTHER ASSOCIATES INCLUDE ARCTOSTAPHYLOS VISCIDA, ADENOSTOMA FASCICULATUM, ETC.

General: POP #S FOR PARTS OF EO: <2000 IN 1984; 500+ IN 1986; UNK # IN 1987, 1989, 1990; >1000 IN 1993; 12,000 IN 1994; UNK # IN 2005; SEVERAL 1000S IN 2007; 600+ IN 2009; 200+ IN 2010, 7 IN 2011, SEEN IN 2017. INCL FORMER EO#S 7, 8, 12, 13, & 15.

Owner/Manager: BLM, DFG, PVT

Galium californicum ssp. sierrae

Element Code: PDRUB0N0E7

El Dorado bedstraw

Listing Status:	**Federal:**	Endangered	**CNDDB Element Ranks:**	**Global:**	G5T1
	State:	Rare		**State:**	S1
	Other:	Rare Plant Rank - 1B.2, SB_RSABG-Rancho Santa Ana Botanic Garden, SB_UCBG-UC Botanical Garden at Berkeley			

Habitat:	**General:**	CISMONTANE WOODLAND, CHAPARRAL, LOWER MONTANE CONIFEROUS FOREST.
	Micro:	IN PINE-OAK WOODLAND OR CHAPARRAL. RESTRICTED TO GABBROIC OR SERPENTINE SOILS. 130-595 M.

Occurrence No.	1	**Map Index:**	12104	**EO Index:**	17316	**Element Last Seen:**	XXXX-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	XXXX-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2007-04-25

Quad Summary:	Pilot Hill (3812171)
County Summary:	El Dorado

Lat/Long:	38.75434 / -121.05799	**Accuracy:**	1/5 mile
UTM:	Zone-10 N4291306 E668748	**Elevation (ft):**	440
PLSS:	T10N, R08E, Sec. 01, NW (M)	**Acres:**	0.0

Location:	NEAR CONFLUENCE OF SWEETWATER CREEK SOUTH FORK AMERICAN RIVER AT FOLSOM LAKE.
Detailed Location:	
Ecological:	
General:	ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1980 CNPS MAP; UNKNOWN WHEN PLANTS WERE SEEN. NEEDS FIELDWORK.
Owner/Manager:	UNKNOWN

Occurrence No.	4	**Map Index:**	12130	**EO Index:**	17311	**Element Last Seen:**	1958-05-29
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1958-05-29
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2008-12-05

Quad Summary:	Pilot Hill (3812171)
County Summary:	El Dorado

Lat/Long:	38.76794 / -121.03883	**Accuracy:**	1/5 mile
UTM:	Zone-10 N4292851 E670381	**Elevation (ft):**	800
PLSS:	T11N, R08E, Sec. 36, NW (M)	**Acres:**	0.0

Location:	APPROX 0.5 MILE SOUTH OF NEW SALMON FALLS BRIDGE, SOUTH FORK AMERICAN RIVER, ABOUT 10 MILES NORTHEAST OF FOLSOM.
Detailed Location:	
Ecological:	
General:	SITE BASED ON AN UNDATED CRAMPTON COLLECTION & A 1958 SMITH OBSERVATION. NEEDS FIELDWORK.
Owner/Manager:	PVT

Occurrence No.	5	**Map Index:**	16272	**EO Index:**	8129	**Element Last Seen:**	2017-05-12
Occ. Rank:	Excellent			**Presence:**	Presumed Extant	**Site Last Seen:**	2017-05-12
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2018-07-25

Quad Summary:	Pilot Hill (3812171)
County Summary:	El Dorado

Lat/Long:	38.76181 / -121.02644	**Accuracy:**	specific area
UTM:	Zone-10 N4292194 E671473	**Elevation (ft):**	1000
PLSS:	T11N, R08E, Sec. 36, E (M)	**Acres:**	35.0

Location:	RAVINE OPENING INTO SOUTH FORK AMERICAN RIVER, 2 MILES EAST OF SALMON FALLS BRIDGE, EAST OF FOLSOM LAKE.
Detailed Location:	3 COLONIES MAPPED BY CNDDB. EASTERN COLONY ALONG NORTH-FACING SLOPE WITHIN THE PROPOSED PLANT PRESERVE AREA. FOUND IN SOMEWHAT SHELTERED AREAS SOUTH OF THE DRAINAGE UP TO THE MIDDLE OF THE SLOPE.
Ecological:	WESTERN COLONIES ON STEEP NORTH-FACING SLOPE, IN SMALL GROVE OF PINUS PONDEROSA. RESCUE SOILS. SOME SCOTCH BROOM PRESENT. E COLONY ON RESCUE STONY LOAM SOILS, IN A MODERATELY DENSE STAND OF GABBROIC NORTHERN MIXED CHAPARRAL.
General:	TWO W COLONIES SEEN BY STEBBINS IN 1976. 1000 PLANTS AT E COLONY BY FRASER AND CRAIG IN 1994. MIDDLE POLYGON: HUNDREDS OF PLANTS ALONG TRAIL IN THIS AREA IN 2011, 100 PLANTS IN 2017. INCLUDES FORMER OCC #6.
Owner/Manager:	BLM, DFG

Occurrence No.	12	**Map Index:**	49114	**EO Index:**	49114	**Element Last Seen:**	1994-06-16
Occ. Rank:	Excellent			**Presence:**	Presumed Extant	**Site Last Seen:**	1994-06-16
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2002-10-23

Quad Summary:	Clarksville (3812161), Pilot Hill (3812171)
County Summary:	El Dorado

Lat/Long:	38.74609 / -121.03649	**Accuracy:**	specific area
UTM:	Zone-10 N4290431 E670636	**Elevation (ft):**	1050
PLSS:	T10N, R09E, Sec. 06, W (M)	**Acres:**	12.8

Location:	RIDGE BETWEEN SWEETWATER & CRACKER CREEKS, NORTH OF CLARKSVILLE, EAST OF FOLSOM LAKE.
Detailed Location:	5 COLONIES MAPPED AS 4 POLYGONS FROM TOP OF 1361' PEAK & ALONG THE E EDGE OF RIDGE, EXTENDING DOWN A SEASONAL DRAINAGE FOR 1000 FT TO ABOUT 100 FT ABOVE CRACKER CRK. MAPPED WITHIN THE W 1/2 OF SEC 6 & THE NE 1/4 OF THE NW 1/4 OF SEC 7.
Ecological:	ON OPEN RESCUE STONY LOAM SOILS, GROWING AMONGST ROCKS AND BOULDERS IN THE GABBROIC NORTHERN MIXED CHAPARRAL PLANT COMMUNITY. ASSOCIATES INCLUDE ADENOSTOMA FASCICULATUM, ARCTOSTAPHYLOS VISCIDA SSP. VISCIDA, ERIODICTYON CALIFORNICUM, ET AL.
General:	5 COLONIES OBSERVED BY WOOD AND FRASER IN 1994. FROM NORTH TO SOUTH, NUMBER OF PLANTS AT EACH COLONY: 100, 1, 3, 30, AND 1. SITE SHOULD BE PRESERVED AS OPEN SPACE.
Owner/Manager:	PVT-KANAKA VALLEY RANCH

Gratiola heterosepala **Element Code:** PDSCR0R060

Boggs Lake hedge-hyssop

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G2
	State:	Endangered		**State:**	S2
	Other:	Rare Plant Rank - 1B.2, BLM_S-Sensitive			
Habitat:	**General:**	MARSHES AND SWAMPS (FRESHWATER), VERNAL POOLS.			
	Micro:	CLAY SOILS; USUALLY IN VERNAL POOLS, SOMETIMES ON LAKE MARGINS. 4-2410 M.			

Occurrence No.	15 **Map Index:** 11792	**EO Index:**	17776	**Element Last Seen:**	1987-04-17
Occ. Rank:	None	**Presence:**	Extirpated	**Site Last Seen:**	1987-04-17
Occ. Type:	Natural/Native occurrence	**Trend:**	Decreasing	**Record Last Updated:**	2017-12-13

Quad Summary: Rocklin (3812172)

County Summary: Placer

Lat/Long:	38.76123 / -121.24390	**Accuracy:**	specific area
UTM:	Zone-10 N4291744 E652578	**Elevation (ft):**	290
PLSS:	T11N, R07E, Sec. 31, NW (M)	**Acres:**	1.4

Location: JOHNSON RANCH, APPROXIMATELY 0.75 MILE SOUTH OF HWY 80 BETWEEN ROCKLIN & ROSEVILLE.

Detailed Location: MAPPED AS 2 POLYGONS IN SW1/4 OF NW1/4 SEC 31.

Ecological: NORTHERN MUDFLOW VERNAL POOL IN OPEN ANNUAL GRASSLAND NEAR EDGE OF OAK WOODLAND. GRATIOLA EBRACTEATA ALSO FOUND IN DEEPER VERNAL POOLS IN THE AREA.

General: MORE THAN 500 PLANTS IN 1986. SOUTHERN POLYGON IS PROBABLY EXTIRPATED ACCORDING TO WITHAM'S 2008 AERIAL PHOTO INTERPRETATION; A HOUSING DEVELOPMENT NOW EXISTS THERE. BY 2016, ENTIRE AREA HAS BEEN DEVELOPED, SITE EXTIRPATED.

Owner/Manager: PVT

Carex xerophila **Element Code:** PMCYP03M60

chaparral sedge

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G2
	State:	None		**State:**	S2
	Other:	Rare Plant Rank - 1B.2			
Habitat:	**General:**	CHAPARRAL, CISMONTANE WOODLAND, LOWER MONTANE CONIFEROUS FOREST.			
	Micro:	SERPENTINITE, GABBROIC. 275-770 M.			

Occurrence No.	7	**Map Index:** A1913	**EO Index:**	103483	**Element Last Seen:** 2015-08-04
Occ. Rank:	Excellent		**Presence:**	Presumed Extant	**Site Last Seen:** 2015-08-04
Occ. Type:	Natural/Native occurrence		**Trend:**	Unknown	**Record Last Updated:** 2016-09-22

Quad Summary: Pilot Hill (3812171)

County Summary: El Dorado

Lat/Long:	38.76303 / -121.02546	**Accuracy:**	specific area
UTM:	Zone-10 N4292331 E671555	**Elevation (ft):**	915
PLSS:	T11N, R09E, Sec. 31, NW (M)	**Acres:**	9.0

Location: ABOUT 0.6-1.3 AIR MILES EAST OF SALMON FALLS RD AND ABOUT 0.5 MILE SOUTH OF SOUTH FORK AMERICAN RIVER.

Detailed Location: MAPPED BY CNDDB AS 12 POLYGONS FROM 2015 DAWSON COORDINATES, IN THE NW 1/4 SECTION 31 AND THE EAST HALF OF SECTION 36.

Ecological: ALONG TRAILS AND IN CLEARED OR BURNED AREAS. ASSOCIATED WITH ADENOSTOMA FASCICULATUM, ARCTOSTAPHYLOS VISCIDA, TOXICODENDRON DIVERSILOBUM, AND QUERCUS SPP.

General: >300 PLANTS OBSERVED IN 2015.

Owner/Manager: BLM, DFG-PINE HILL ER

Allium jepsonii

Element Code: PMLIL022V0

Jepson's onion

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G2
	State:	None		**State:**	S2
	Other:	Rare Plant Rank - 1B.2, BLM_S-Sensitive, USFS_S-Sensitive			
Habitat:	**General:**	CHAPPARAL, CISMONTANE WOODLAND, LOWER MONTANE CONIFEROUS FOREST.			
	Micro:	ON SERPENTINE SOILS IN SIERRA FOOTHILLS, VOLCANIC SOIL ON TABLE MTN. ON SLOPES AND FLATS; USUALLY IN AN OPEN AREA. 355-1130 M.			

Occurrence No.	18	**Map Index:** 61016	**EO Index:** 61052	**Element Last Seen:**	2003-06-22
Occ. Rank:	Good		**Presence:** Presumed Extant	**Site Last Seen:**	2003-06-22
Occ. Type:	Natural/Native occurrence		**Trend:** Unknown	**Record Last Updated:**	2019-04-04

Quad Summary: Auburn (3812181)

County Summary: Placer

Lat/Long:	38.96233 / -121.08918	**Accuracy:**	80 meters
UTM:	Zone-10 N4314333 E665554	**Elevation (ft):**	1320
PLSS:	T13N, R08E, Sec. 21, SW (M)	**Acres:**	0.0

Location: CORNER OF DRY CREEK ROAD AND BLUE GRASS DRIVE; NORTH OF AUBURN AND EAST OF HIGHWAY 49.

Detailed Location: EAST SIDE OF INTERSECTION. NE 1/4 OF SW 1/4 OF SECTION 21.

Ecological: FOOTHILL WOODLAND ON SERPENTINE SOIL. PLANTS GROWING ON SERPENTINE OUTCROP NEAR A SEEP.

General: APPROXIMATELY 50 INDIVIDUALS OBSERVED IN 2003.

Owner/Manager: UNKNOWN

Chlorogalum grandiflorum

Element Code: PMLIL0G020

Red Hills soaproot

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G3
	State:	None		**State:**	S3
	Other:	Rare Plant Rank - 1B.2, BLM_S-Sensitive			
Habitat:	**General:**	CISMONTANE WOODLAND, CHAPARRAL, LOWER MONTANE CONIFEROUS FOREST.			
	Micro:	OCCURS FREQUENTLY ON SERPENTINE OR GABBRO, BUT ALSO ON NON-ULTRAMAFIC SUBSTRATES; OFTEN ON "HISTORICALLY DISTURBED" SITES. 265-1695 M.			

Occurrence No.	22	**Map Index:**	12168	**EO Index:**	7486	**Element Last Seen:**	2014-04-09
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2014-04-09
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2015-01-21

Quad Summary:	Pilot Hill (3812171)
County Summary:	El Dorado

Lat/Long:	38.76471 / -121.02047	**Accuracy:**	specific area
UTM:	Zone-10 N4292527 E671983	**Elevation (ft):**	1000
PLSS:	T11N, R09E, Sec. 31, N (M)	**Acres:**	153.0

Location:	ON BOTH SIDES OF SOUTH FORK AMERICAN RIVER, BETWEEN THE MOUTH OF WEBER CREEK AND SALMON FALLS RD.
Detailed Location:	SEVERAL COLONIES MAPPED BY CNDDB AS 10 POLYGONS. MOSTLY WITHIN SECTION 36, THE N 1/2 OF SECTION 31, THE S 1/2 OF SECTION 30, AND THE SE 1/4 OF THE SE 1/4 OF SECTION 25.
Ecological:	OPEN AREAS IN CHAPARRAL, WHERE SHRUBS ARE LOW AND SCATTERED. OFTEN ON BANKS OF SMALL EVANESCENT STREAMLETS. ON ROCKY GABBRO SOILS WITH WYETHIA BOLANDERI, CEANOTHUS RODERICKII, CEANOTHUS LEMMONII, AND ADENOSTOMA FASCICULATUM.
General:	FEWER THAN 100 PLANTS OBSERVED IN 1984. ~100 PLANTS IN THE S PORTION OF FAR NE COLONY IN 1993. 500 IN LARGER CENTRAL COLONY IN 1994. FEWER THAN 50 IN PORTION OF SE 1/4 SEC 36 IN 2012. UNKNOWN # IN 2005 & 2014. INCL FORMER OCCS #23-27 & 31.
Owner/Manager:	PVT, DFG, BLM, USBOR

Occurrence No.	56	**Map Index:**	51019	**EO Index:**	51019	**Element Last Seen:**	2000-06-21
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2000-06-21
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2003-04-17

Quad Summary:	Colfax (3912018)
County Summary:	Placer

Lat/Long:	39.04014 / -120.87841	**Accuracy:**	specific area
UTM:	Zone-10 N4323372 E683617	**Elevation (ft):**	2100
PLSS:	T14N, R10E, Sec. 20, SW (M)	**Acres:**	5.8

Location:	MEXICAN GULCH, ALONG THE ROAD FROM YANKEE JIMS TO WEIMAR/COLFAX, ABOUT 1.6 ROAD MILES WNW OF YANKEE HILL.
Detailed Location:	MAPPED WITHIN THE SOUTH HALF OF THE SW 1/4 OF SECTION 20.
Ecological:	CLEARED ROADSIDE. ADJACENT VEGETATION IS DENSE ARCTOSTAPHYLOS VISCIDA CHAPARRAL. SOILS APPARAENTLY SHALLOW. ASSOCIATES INCLUDE QUERCUS CHRYSOLEPIS, CHAMAEBATIA FOLIOLOSA, ERIOPHYLLUM LANATUM, DICHELOSTEMMA MULTIFLORUM, MONARDELLA, ET AL.
General:	MORE THAN 300 PLANTS SEEN BY FRANKLIN IN 2000.
Owner/Manager:	BLM

Occurrence No.	72	**Map Index:**	73023	**EO Index:**	73610	**Element Last Seen:**	2007-03-26
Occ. Rank:	Fair			**Presence:**	Presumed Extant	**Site Last Seen:**	2007-03-26
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2008-12-01

Quad Summary: Coloma (3812078)

County Summary: El Dorado

Lat/Long:	38.76025 / -120.93939	**Accuracy:**	80 meters
UTM:	Zone-10 N4292188 E679040	**Elevation (ft):**	1115
PLSS:	T11N, R09E, Sec. 35, SE (M)	**Acres:**	0.0

Location: E SIDE OF SPRINGVALE RD BETWEEN ROSSLER RD AND LAKEVIEW DR, SW OF FOUR CORNERS.

Detailed Location: MAPPED BY CNDDB ACCORDING TO A 2007 WILSON MAP.

Ecological: CHAPARRAL WITHIN MIXED OAK WOODLAND. ASSOCIATED WITH CEANOTHUS CUNEATUS ON SERPENTINE SOIL, SW ASPECT. PACKERA LAYNEAE ALSO AT THIS SITE.

General: 200 PLANTS SEEN IN 2007.

Owner/Manager: PVT

Occurrence No.	97	**Map Index:**	95003	**EO Index:**	96135	**Element Last Seen:**	2010-06-17
Occ. Rank:	Fair			**Presence:**	Presumed Extant	**Site Last Seen:**	2010-06-17
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2015-01-23

Quad Summary: Greenwood (3812088)

County Summary: El Dorado

Lat/Long:	38.94104 / -120.87893	**Accuracy:**	specific area
UTM:	Zone-10 N4312373 E683827	**Elevation (ft):**	2360
PLSS:	T13N, R10E, Sec. 29, SE (M)	**Acres:**	10.0

Location: APPROXIMATELY 1.61 AND 1.8 AIR MILES ESE OF SPANISH DRY DIGGINGS, APPROXIMATELY 3 AIR MILES NW OF GEORGETOWN.

Detailed Location: MAPPED ACCORDING TO COORDINATES PROVIDED BY TIESEN, IN THE SOUTH 1/2 OF THE SE 1/4 OF SECTION 29. SITE QUALITY OF EASTERN POLYGON REPORTED AS GOOD; SITE QUALITY OF WESTERN POLYGON REPORTED AS FAIR.

Ecological: IN 1985 AND 2009 PLANTATIONS AND ON OLD SKID TRAIL. W-FACING ON RIDGETOP AND ON SW-FACING 30% SLOPES. ASSOCIATED WITH PINUS PONDEROSA, QUERCUS KELLOGGII, WOOLLY SUNFLOWER, CYTISUS SCOPARIUS, CEANOTHUS TOMENTOSUS, TARWEED, GRASSES, ETC.

General: APPROXIMATELY 100 PLANTS OBSERVED IN THE EASTERN COLONY AND APPROXIMATELY 50 PLANTS OBSERVED IN THE WESTERN COLONY IN 2010. EASTERN COLONY RECEIVED PRE-EMERGENT HERBICIDE APPLICATION IN 2009. PLANTS ARE STILL THRIVING AFTER DISTURBANCE.

Owner/Manager: PVT-SIERRA PACIFIC

Occurrence No.	101	**Map Index:**	95009	**EO Index:**	96141	**Element Last Seen:**	2010-06-26
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2010-06-26
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2015-01-23

Quad Summary:	Colfax (3912018)
County Summary:	Placer

Lat/Long:	39.06555 / -120.94805	**Accuracy:**	80 meters
UTM:	Zone-10 N4326054 E677525	**Elevation (ft):**	1940
PLSS:	T14N, R09E, Sec. 14, NW (M)	**Acres:**	0.0

Location:	YANKEE JIM'S ROAD IN BUNCH CANYON, 0.5 MILE SOUTHEAST OF ITS JUNCTION WITH CANYON WAY.
Detailed Location:	MAPPED ACCORDING TO COORDINATES ON COLLECTION LABEL, IN THE SE 1/4 OF THE NW 1/4 OF SECTION 14.
Ecological:	OAK/PINE WOOD WITH CREEKSIDE CHAPARRAL. LIMITED TO THE EDGE OF A FLAT, ROCKY AREA WITH A WATER SEEP.
General:	ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 2010 HELMKAMP & HELMKAMP COLLECTION; NOTED AS "OCCASIONAL".
Owner/Manager:	UNKNOWN

Fritillaria eastwoodiae

Element Code: PMLIL0V060

Butte County fritillary

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G3Q
	State:	None		**State:**	S3
	Other:	Rare Plant Rank - 3.2, USFS_S-Sensitive			
Habitat:	**General:**	CHAPARRAL, CISMONTANE WOODLAND, LOWER MONTANE CONIFEROUS FOREST.			
	Micro:	USUALLY ON DRY SLOPES BUT ALSO FOUND IN WET PLACES; SOILS CAN BE SERPENTINE, RED CLAY, OR SANDY 4550-1475 M.			

Occurrence No.	101	**Map Index:**	42638	**EO Index:**	42638	**Element Last Seen:**	1967-04-01
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1967-04-01
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2000-03-28

Quad Summary: Greenwood (3812088)

County Summary: El Dorado, Placer

Lat/Long:	38.94538 / -120.90981	**Accuracy:**	3/5 mile
UTM:	Zone-10 N4312793 E681140	**Elevation (ft):**	1500
PLSS:	T13N, R10E, Sec. 30, SW (M)	**Acres:**	0.0

Location: SPANISH DRY DIGGINGS, ABOUT 3.4 AIR MILES NORTH OF GREENWOOD, MIDDLE FORK AMERICAN RIVER CANYON.

Detailed Location: LOCATION UNCERTAIN; LOCATION GIVEN AS "SPANISH DIGGINGS, CA. 5 MILES SE OF AUBURN". MAPPED AS BEST GUESS BY CNDDB AT SPANISH DRY DIGGINGS WHICH IS ABOUT 8.5 MILES NNE OF AUBURN.

Ecological:

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1967 COLLECTION BY RODERICK. TAXONOMIC STATUS UNCERTAIN; ORIGINALLY COLLECTED AS FRITILLARIA PHAEANTHERA.

Owner/Manager: UNKNOWN

Occurrence No.	102	**Map Index:**	42639	**EO Index:**	42639	**Element Last Seen:**	1967-04-01
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1967-04-01
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2000-03-28

Quad Summary: Auburn (3812181)

County Summary: El Dorado, Placer

Lat/Long:	38.91291 / -121.04260	**Accuracy:**	3/5 mile
UTM:	Zone-10 N4308933 E669709	**Elevation (ft):**	900
PLSS:	T12N, R08E, Sec. 12 (M)	**Acres:**	0.0

Location: AMERICAN RIVER CANYON, NEAR CONFLUENCE OF MIDDLE AND NORTH FORKS AMERICAN RIVER, EAST OF AUBURN.

Detailed Location: LOCATION UNCERTAIN; DIRECTIONS GIVEN AS "ON THE OLD AUBURN TOLL TOAD, AMERICAN CANYON, CA. 1 MILE SOUTH TO SOUTHEAST OF AUBURN." MAPPED AS BEST GUESS BY CNDDB ON THE AMERICAN RIVER CANYON ABOUT 1.5 MILES ENE OF AUBURN ON HWY 49.

Ecological: AROUND AND UNDER SCATTERED DECIDUOUS OAKS AND SHRUBS. ON RED GRITTY CLAY SOILS WITH MUCH HUMUS.

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1967 COLLECTION BY RODERICK. LOCATION VERY UNCLEAR; NEEDS FIELDWORK. TAXONOMIC STATUS UNCERTAIN; ORIGINALLY COLLECTED AS FRITILLARIA PHAEANTHERA.

Owner/Manager: UNKNOWN

Poa sierrae **Element Code:** PMPOA4Z310

Sierra blue grass

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G3
	State:	None		**State:**	S3
	Other:	Rare Plant Rank - 1B.3, USFS_S-Sensitive			
Habitat:	**General:**	LOWER MONTANE CONIFEROUS FOREST.			
	Micro:	SHADY, MOIST, ROCKY SLOPES. OFTEN IN CANYONS. 365-1915 M.			

Occurrence No.	5 **Map Index:** 81992	**EO Index:**	82969	**Element Last Seen:**	1952-06-22
Occ. Rank:	Unknown	**Presence:**	Presumed Extant	**Site Last Seen:**	1952-06-22
Occ. Type:	Natural/Native occurrence	**Trend:**	Unknown	**Record Last Updated:**	2014-08-27

Quad Summary: Colfax (3912018)

County Summary: Placer

Lat/Long:	39.11237 / -120.90695	**Accuracy:**	nonspecific area
UTM:	Zone-10 N4331332 E680962	**Elevation (ft):**	1200
PLSS:	T15N, R10E, Sec. 31, NW (M)	**Acres:**	71.0

Location: 1.5 MILES NE OF BRIDGE ON COLFAX-IOWA HILL ROAD, ALONG AMERICAN RIVER.

Detailed Location: SE BANK OF AMERICAN RIVER. MAPPED BY CNDDB ALONG THE NORTH FORK AMERICAN RIVER TO INCLUDE 1.5 RIVER MILES AND 1.5 AIR MILES NE OF THE BRIDGE ON IOWA HILL ROAD CROSSING THE NORTH FORK AMERICAN RIVER.

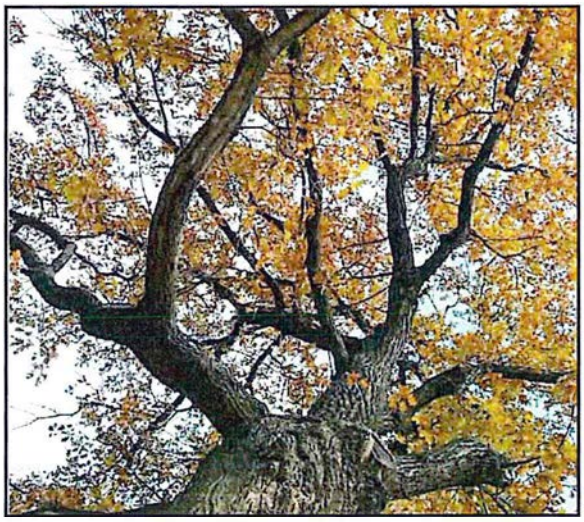
Ecological: STEEP, SHADY TALUS OF METAMORPHIC ROCK.

General: ONLY SOURCE OF INFORMATION IS A 1952 STEBBINS COLLECTION. NEEDS FIELDWORK.

Owner/Manager: BLM

ENCLOSURE E: EL DORADO COUNTY OAK RESOURCES MANAGEMENT PLAN

El Dorado County
Oak Resources
Management Plan



September 2017

El Dorado County Community Development Agency
Long Range Planning Division
2850 Fairlane Court, Placerville, CA 95667

OAK RESOURCES MANAGEMENT PLAN

Table of Contents

1.0 Introduction 1

1.1 Purpose 1

1.2 Goals and Objectives of Plan 2

1.3 Oak Resources in El Dorado County 3

1.3.1 Oak Woodlands 3

1.3.2 Oak Trees 4

1.4 Economic Activity, Land, and Ecosystem Values of Oak Resources 4

1.5 State-level Regulations 4

2.0 Oak Resources Impact Mitigation Requirements 6

2.1 Applicability, Exemptions and Mitigation Reductions 6

2.1.1 Single-Family Lot Exemption 6

2.1.2 Fire Safe Activities Exemption 6

2.1.3 Utility Line Maintenance Exemption 6

2.1.4 County Road Project Exemption 7

2.1.5 Affordable Housing Exemption 7

2.1.6 Agricultural Activities Exemption 7

2.1.7 Emergency Operations Exemption 7

2.1.8 Timber Harvest Plan Exemption 7

2.1.9 Dead, Dying, or Diseased Trees Exemption 7

2.1.10 Personal Use Exemption 8

2.1.11 Mitigation Reductions for Affordable Housing 8

2.2 Oak Woodland Permits and Mitigation 8

2.2.1 Oak Woodland Removal Permits 9

2.2.2 Oak Woodland Mitigation 10

2.3 Individual Native Oak Tree and Heritage Tree Permits and Mitigation 12

2.3.1 Oak Tree Removal Permits 12

2.3.2 Oak Tree Mitigation 13

2.4 Replacement Planting Guidelines 14

2.5 Oak Resources Technical Reports 17

2.6 Mitigation Program Flexibility 18

3.0 In-Lieu Fee 19
3.1 Oak Woodlands 19
3.2 Oak Trees 20
3.3 Fee Adjustments, Accounting, and Reviews 21
4.0 Priority Conservation Areas 22
4.1 Identification of Priority Conservation Areas 22
4.2 Management of PCAs 24
4.3 Conservation Outside of PCAs 24
4.4 Conservation Easements 25
4.5 Deed Restrictions 25
5.0 Application of ORMP to Development Review Process 26
6.0 Definitions 28

Appendices

A. Oak Resources Management Plan Background and Support Information
B. El Dorado County Oak Resources In-Lieu Fees Nexus Study
C. General Plan Goals, Objectives, Policies and Measures Applicable to the Oak Resources Management Plan
D. Best Management Practices for Oak Resources
E. Guidelines for Maintenance, Restoration, and Rehabilitation of Oak Resources
F. Resources
G. Literature Cited

List of Tables

1. Acreage of Oak Woodland Types in the ORMP Planning Area (2015 FRAP Data) 3
2. Affordable Housing Mitigation Reduction 8
3. Oak Woodland Mitigation Ratios 10
4. Oak Tree Replacement Quantities 15
5. Oak Woodland In-Lieu Fee 19
6. Individual Oak Tree In-Lieu Fee 20
7. PCA Parcel Statistics 22

List of Figures

1. Oak Resources Permitting and Mitigation Process 11
2. Priority Conservation Areas, Oak Woodlands, and Public Lands in El Dorado County 23

1.0 Introduction

This Oak Resources Management Plan (ORMP) updates and revises the Oak Woodland Management Plan adopted by the El Dorado County Board of Supervisors on May 6, 2008 (El Dorado County 2008). It incorporates more recent oak resources mapping data for the County and reflects policy language changes made during the General Plan Biological Policy Review project conducted in 2015. This ORMP incorporates relevant information included in the 2008 Plan, where applicable, and was prepared in coordination with El Dorado County Community Development Agency staff. It also incorporates public input gathered during project-focused hearings and direction given by the El Dorado County Board of Supervisors. All relevant terms and definitions are located in Section 6.0 (Definitions) of this Plan.

1.1 Purpose

The purpose of this ORMP is to define mitigation requirements for impacts to oak resources (oak woodlands, individual native oak trees, and Heritage Trees) and to outline the County's strategy for oak woodland conservation. This ORMP functions as the oak resources component of the County's biological resources mitigation program, identified in General Plan Policy 7.4.2.8. This ORMP identifies standards for oak woodland and native oak tree impact determination, mechanisms to mitigate oak woodland and native oak tree impacts, technical report submittal requirements, minimum qualifications for technical report preparation, mitigation monitoring and reporting requirements, and projects or actions that are exempt from mitigation requirements. This ORMP also establishes an in-lieu fee payment option for impacts to oak resources, identifies Priority Conservation Areas (PCAs) where oak woodland conservation efforts may be focused, and outlines minimum standards for identification of oak woodland conservation areas outside the PCAs. Requirements for maintenance and monitoring of conserved oak woodland areas and identification of allowable uses within conserved oak woodland areas are also included in this ORMP. Lastly, the ORMP establishes a plan for voluntary conservation that landowners, the County, and others may use to seek grants and cost-sharing from state programs for oak woodland conservation in El Dorado County.

Loss and fragmentation of wildlife habitat, including oaks and oak woodlands, was identified in the 2004 General Plan Environmental Impact Report (EIR) as a significant impact that would result from development under the General Plan. The County identified several mitigation measures which would reduce the severity of these impacts, although not to a less than significant level. These mitigation measures included Policies 7.4.4.4, 7.4.4.5 and 7.4.5.2, and the related Implementation Measure CO-P. During the General Plan Biological Policy Review project conducted in 2015, these policies were edited and consolidated into one single policy (Policy 7.4.4.4). Implementation Measure CO-P was also modified during this process. The revised language in Policy 7.4.4.4 states that mitigation requirements for impacts to oak resources (oak woodlands, individual native oak trees, and Heritage Trees) shall be outlined in this ORMP. Revised Implementation Measure CO-P directs the County to develop and adopt an ORMP that addresses the following:

- Mitigation standards for oak resources impacts;
- Definitions of exempt projects and actions;

- Technical report requirements;
- Oak resources mitigation options and standards;
- Heritage Tree mitigation standards; and
- Oak resources mitigation monitoring and reporting requirements.

An Oak Resources Conservation ordinance that incorporates the standards outlined in this ORMP will be developed in conjunction with adoption of the ORMP.

At the state level, the Oak Woodlands Conservation Act of 2001 recognizes the importance of private land stewardship in conserving oak woodlands. The legislation established the California Oak Woodlands Conservation Program (COWCP), the mission of which is to "conserve the integrity and diversity of oak woodlands across California's working landscapes through incentives and education." The COWCP provides technical and financial incentives to private landowners to protect and promote biologically functional oak woodlands.

This ORMP serves multiple purposes. It defines the County's conservation strategy for oak resources and provides a framework for mitigating impacts to oak resources. It also complies with Implementation Measure CO-P and constitutes the oak portion of the County's Biological Resources Mitigation Program (General Plan Policy 7.4. 2.8). Finally, it establishes a plan for voluntary conservation that landowners, the County, and others can use to seek grants and cost-sharing from state and federal programs for oak woodland conservation in El Dorado County.

1.2 Goals and Objectives of Plan

The ORMP goals are guided by two General Plan Objectives: Objective 7.4.2 and Objective 7.4.4. General Plan Objective 7.4.2 states: *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.

General Plan Objective 7.4.4 states: *Forest, Oak Woodland, and Tree Resources*: Protect and conserve forest, oak woodland, and tree resources for their wildlife habitat, recreation, water production, domestic livestock grazing, production of a sustainable flow of wood products, and aesthetic values.

The following goals set forth by the General Plan are met in this ORMP:

- Identify standards for determining oak woodland and native oak tree impacts, outline impact mitigation requirements and options, identify technical report submittal requirements, and outline impact mitigation monitoring and reporting requirements;
- Define Heritage Trees and identify impact mitigation requirements;
- Provide mitigation alternatives for impacts to oak resources consistent with state-level requirements;
- Provide a flexible framework for oak resources mitigation via on-site and off-site mechanisms, including an in-lieu fee payment program;
- Develop an oak woodland in-lieu fee and an individual native oak tree-based in-lieu fee;

- Identify Priority Conservation Areas (PCAs) within large expanses of contiguous oak woodland habitat where land or conservation easements may be acquired from willing sellers to offset the effects of increased habitat loss and fragmentation elsewhere;
- Identify minimum standards under which oak woodland conservation may occur outside of identified PCAs;
- Enhance oak woodland conservation by connecting acquisitions from willing sellers with existing open space, including publicly-owned lands that are managed for oak woodland habitat values (e.g., ecological preserves, recreation lands, rangelands, or natural resource areas) consistent with the County's open space conservation goals (Goal 7.6; Policy 7.6.1.1); and
- Establish a database inventory of interested buyers and willing landowners wishing to participate in oak woodland acquisition and management mitigation options (Policy 7.4.2.8).

1.3 Oak Resources in El Dorado County

1.3.1 Oak Woodlands

The term "oak woodland" is defined in the Oak Woodlands Conservation Act (Article 3.5 (commencing with Section 1360) of Chapter 4 of Division 2 of the Fish and Game Code) as "an oak stand with a greater than ten percent canopy cover or that may have historically supported greater than ten percent canopy cover." For the purposes of this ORMP, the conservation focus is on existing oak woodlands. This ORMP addresses the same study area (below 4,000 feet elevation) and same categories of oak woodlands (California Department of Forestry and Fire Protection (CAL FIRE) California Fire and Resource Assessment Program (FRAP) data) as were addressed in the 2008 Oak Woodland Management Plan. These categories of oak woodland were also addressed in the 2004 General Plan using FRAP data from 2002. More recent oak woodland distribution data for El Dorado County available via FRAP (CAL FIRE 2015) identifies six oak woodland types, which are listed in Table 1 below, along with the acreage of each category found within the ORMP study area. Less than 3,500 acres of valley oak woodland is mapped for El Dorado County, which is designated as a "sensitive habitat" in the General Plan EIR. Finally, while coastal oak woodland is identified in the 2015 FRAP vegetation data set for the ORMP planning area, its presence is unlikely given the range of its dominant tree species (coast live oak (*Quercus agrifolia*)). This classification may be the result of an image processing error during creation of the 2015 FRAP data set and the area is likely another oak woodland type.

Table 1
Acreage of Oak Woodland Types in the ORMP Planning Area (2015 FRAP Data)

Oak Woodland Type	CWHR Code	Acreage	Percent
Blue oak woodland	BOW	46,521	18.9%
Blue oak-foothill pine	BOP	64,740	26.2%
Coastal oak woodland	COW	2	<0.1%
Montane hardwood	MHW	98,930	40.1%
Montane hardwood-conifer	MHC	32,643	13.2%
Valley oak woodland	VOW	3,970	1.6%
	Total:	**246,806**	**100%**

A thorough discussion of oak woodland habitat identification and values is presented in Appendix A.

1.3.2 Oak Trees

There are six primary native oak tree species in El Dorado County, including blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*), California black oak (*Quercus kelloggii*), interior live oak (*Quercus wislizeni*), canyon live oak (*Quercus chrysolepis*), and Oregon oak (*Quercus garryana*). Additionally, one native hybrid between California black oak and interior live oak exists, known as oracle oak (*Quercus x morehus*). These oak species comprise the County's oak woodlands and also occur outside of oak woodlands as isolated individuals or small groups.

1.4 Economic Activity, Land, and Ecosystem Values of Oak Resources

Agriculture and recreation-based tourism are important economic generators in El Dorado County. Oak resources provide value for these activities, including forage value for ranching, soil retention and watershed function benefits that contribute to agricultural activities, and aesthetic value for agri-tourism. Deer and other game species are dependent on oak woodland habitat and provide recreational hunting opportunities, which can generate revenues for ranching land owners through hunting leases. Oak resources contribute to a high-quality visit for recreation tourists, whose activities may include camping, fishing, hiking, bird-watching, and equestrian trail riding.

Studies have also concluded that the presence of oak resources enhances property value by providing shade, wind breaks, sound absorption, land use buffers, erosion control, and aesthetic beauty. Oak resources also contribute to healthy lands and watersheds. They do this by providing habitat for animals, maintaining water quality, and improving soil characteristics. Oak resources have also been identified as a valuable component in greenhouse gas reduction, trapping and storing atmospheric carbon dioxide.

More information regarding economic activities, land values, and ecosystem values are presented in Appendix A.

1.5 State-level Regulations

California Public Resources Code (PRC) Section 21083.4 requires a county to determine (as part of its project review required under the California Environmental Quality Act) whether a project may result in conversion of oak woodlands that will have a significant effect on the environment. If it determines that a project may have a significant effect, a county shall require one or more oak woodland mitigation alternatives "to mitigate the significant effect of the conversion of oak woodlands." Alternatives include: 1) conserve oak woodlands, 2) plant an appropriate number of replacement trees and maintain those trees for seven years, 3) contribute to the Oak Woodlands Conservation Fund, or 4) other mitigation measures developed by the County. Plantings shall not fulfill more than one half of the mitigation requirements for a project. Where a county adopts, and a project incorporates, one or more of these mitigation measures, the project is deemed to be in compliance with CEQA as it relates to effects on oaks and oak woodlands. This ORMP incorporates a range of mitigation alternatives that conform to these requirements.

No state-level regulations exist that require mitigation for impacts to individual oak trees that occur outside of oak woodlands; however, this ORMP identifies mitigation requirements for individual native oaks trees and Heritage Trees to meet the goals and objectives of the General Plan.

2.0 Oak Resources Impact Mitigation Requirements

The following sections outline mitigation requirements for impacts to oak resources. These mitigation requirements meet the goals and objectives of the General Plan and fulfill the requirements of General Plan Policy 7.4.4.4.

2.1 Applicability, Exemptions and Mitigation Reductions

Oak resources impact mitigation is required for any non-exempt action requiring discretionary development entitlements or approvals from El Dorado County or ministerial actions requiring a building permit or grading permit issued by El Dorado County. All impacts to Heritage Trees, individual valley oak trees, and valley oak woodlands are subject to the mitigation requirements contained herein, regardless of location within or outside of an oak woodland and whether or not the action requires a development permit (except for dead, dying, and diseased trees, as discussed in Section 2.1.9, Dead, Dying, or Diseased Trees Exemption). Exemptions do not apply to removal of Heritage Trees, individual valley oak trees, or valley oak woodlands.

2.1.1 Single-Family Lot Exemption

Projects or actions occurring on lots of 1 acre or less allowing a single-family residence by right, and that cannot be further subdivided without a General Plan Amendment or Zone change are exempted from the mitigation requirements included in this ORMP.

2.1.2 Fire Safe Activities Exemption

Actions taken pursuant to an approved Fire Safe Plan for existing structures or in accordance with defensible space maintenance requirements for existing structures as identified in California Public Resources Code (PRC) Section 4291 are exempted from the mitigation requirements included in this ORMP. Oak resources impacts for initial defensible space establishment for new development are not exempt from the mitigation requirements included in this ORMP. After establishment of defensible space for new development, maintenance of that defensible space thereafter is exempt from the mitigation requirements included in this ORMP.

In addition, fuel modification activities outside of defensible space areas that are associated with fuel breaks, corridors, or easements intended to slow or stop wildfire spread, ensure the safety of emergency fire equipment and personnel, allow evacuation of civilians, provide a point of attack or defense for firefighters during a wildland fire, and/or prevent the movement of a wildfire from a structure to the vegetated landscape, where no grading permit or building permit is applicable, are exempted from the mitigation requirements included in this ORMP.

2.1.3 Utility Line Maintenance Exemption

Actions taken to maintain safe operation of existing utility facilities in compliance with state regulations (PRC 4292-4293 and California Public Utilities Commission (CPUC) General Order 95) are exempted from the mitigation requirements included in this ORMP. Actions associated with development of new utility facilities, including transmission or utility lines, are not exempt.

2.1.4 County Road Project Exemption

Road widening and realignment projects necessary to increase capacity, protect public health, and improve safe movement of people and goods in existing public rights-of-way (as well as acquired rights-of-way necessary to complete the project) where the new alignment is dependent on an existing alignment are exempted from the mitigation requirements included in this ORMP. New proposed roads within the County Circulation Element and internal circulation roads within new or proposed development are not exempt.

2.1.5 Affordable Housing Exemption

Affordable housing projects for lower income households, as defined pursuant to Section 50079.5 of the California Health and Safety Code, that are located within an urbanized area, or within a sphere of influence as defined pursuant to California Government Code §56076 are exempted from the mitigation requirements included in this ORMP.

2.1.6 Agricultural Activities Exemption

With the exception of uses/activities that require issuance of a Conditional Use Permit, and when such uses/activities are otherwise consistent with the Zoning Ordinance (Title 130 of County Code), the following activities are exempted from the mitigation requirements included in this ORMP:

- Agricultural activities conducted for the purposes of producing or processing plant and animal products or the preparation of land for this purpose;
- Agricultural cultivation/operations, whether for personal or commercial purposes (excluding commercial firewood operations);
- Activities occurring on lands in Williamson Act Contracts or under Farmland Security Zone Programs.

2.1.7 Emergency Operations Exemption

Actions taken during emergency firefighting operations or responses to natural disasters (e.g., floods, landslides) and associated post-fire or post-disaster remediation activities are exempted from the mitigation requirements included in this ORMP.

2.1.8 Timber Harvest Plan Exemption

Tree removal permitted under a Timber Harvest Plan approved by CAL FIRE is exempted from the mitigation requirements included in this ORMP.

2.1.9 Dead, Dying, or Diseased Trees Exemption

Individual native oak tree removal (including individual valley oak trees and valley oak trees within valley oak woodlands) is exempted from the mitigation requirements included in this ORMP when:

- The tree is dead, dying, or diseased, as documented in writing by a Certified Arborist or Registered Professional Forester; and/or

- The tree exhibits high failure potential with the potential to injure persons or damage property, as documented in writing by a Certified Arborist or Registered Professional Forester.

2.1.10 Personal Use Exemption

Removal of a native oak tree, other than a Heritage Tree or individual valley oak trees and valley oak woodlands, when it is cut down on the owner's property for the owner's personal use, is exempted from the mitigation requirements included in this ORMP provided that no more than 8 trees are removed from a single parcel per parcel per year and provided that the total diameter inches at breast height (dbh) of trees removed from a single parcel per year does not exceed 140 inches.

2.1.11 Mitigation Reductions for Affordable Housing

This ORMP also provides for reductions to oak woodland mitigation for affordable housing projects that are not exempted as defined above. Specifically, development projects that propose a minimum of 10 percent of the dwelling units as income restricted affordable units, as defined by California Health and Safety Code §50052.5, 50053, and 50093, shall be granted a reduction in the amount of oak woodland that is required to be mitigated, as set forth in Table 2. The reduction is to be applied to the mitigation ratio presented in Table 3 and shall only be applied to the residential portion(s) of the proposed project. This reduction for affordable housing projects does not apply to removal of Heritage Trees or individual valley oak trees. This reduction for affordable housing projects also does not apply to impacts to valley oak woodlands. This reduction for affordable housing projects applies to impacts to other oak woodland habitat and removal of other individual oak trees. In no case shall the mitigation requirement be less than zero.

Table 2
Affordable Housing Mitigation Reduction

Affordable Housing Type (Household Income Level)	Percent Oak Woodland Mitigation Reduction (for portion of project that is income restricted)
Very Low	200%
Lower	100%
Moderate	50%

Example: A project proposes 25% of the units to be affordable in the Lower income category. The oak woodland mitigation ratio may be reduced by 25%. A Moderate income project that provides all units at that income level may reduce the oak woodland mitigation ratio by 50%. A project with 20% Very Low income units would receive a 40% reduction in oak woodland mitigation ratio.

2.2 Oak Woodland Permits and Mitigation

The policy of the County is to preserve oak woodlands when feasible, through the review of all proposed development activities where woodlands are present on either public or private property, while at the same time recognizing individual rights to develop private property in a reasonable manner. As such, the County shall require mitigation for impacts to oak woodlands.

The following sections outline oak woodland permit and mitigation requirements and Figure 1 outlines the permit and mitigation process.

2.2.1 Oak Woodland Removal Permits

An oak woodland removal permit shall be required for discretionary or ministerial (e.g., building permits) projects to authorize removal of any trees that are a component of an oak woodland. An oak resources technical report shall accompany any oak woodland removal permit application submitted to the County. The County may impose such reasonable conditions of approval as are necessary to protect the health of existing oak woodlands, the public, and the surrounding property. Oak woodland removal permit review will be integrated into the environmental review process for discretionary projects or may be processed as an administrative permit for ministerial projects. In addition to findings of consistency with the requirements and standards of this ORMP, the County shall make the following findings before approving an oak woodland removal permit application:

- The proposed action is consistent with the General Plan; and
- The proposed action is specifically allowed by this ORMP and implementing ordinance.

Commercial firewood cutting operations in oak woodlands shall also require an oak woodland removal permit. In reviewing an oak woodland removal permit application for firewood cutting operations, the County shall consider the following:

- Whether the removal of the tree(s) would have a significant negative environmental impact;
- Whether the proposed removal would not result in clear-cutting, but would result in thinning or stand improvement;
- Whether replanting would be necessary to ensure adequate regeneration;
- Whether the removal would create the potential for soil erosion;
- Whether any other limitations or conditions should be imposed in accordance with sound tree management practices; and
- What the extent of the remaining oak woodland coverage would be after firewood cutting.

Fines shall be issued to any person, firm, or corporation that is not exempt from the standards included in this ORMP who impacts an oak woodland without first obtaining an oak woodland removal permit. Fines may be as high as three times the current oak woodland in-lieu fee amount. If an oak woodland is impacted without an oak woodland removal permit, in addition to issuing fines and penalties, any and all applications for development of that property shall be deemed incomplete unless and until the property owner enters into a settlement agreement with the County or all code enforcement and/or criminal proceedings are complete and all penalties, fines and sentences are paid or fulfilled. All monies received as fines for illegal oak tree and woodland removal shall be deposited in the County's Oak Woodland Conservation Fund.

Under penalty of perjury, a code compliance certificate shall be required to affirm no oak woodlands have been impacted (i.e., cut down) on the property that is the subject of an oak woodland removal permit application within 2 years prior to the submission date of the

application. If oak woodlands have been impacted then copies of all permits for such actions must be attached to the certification. If the certification is not included with the application then the application is incomplete. If oak woodlands have been impacted within the 2 year period without the proper permits then the application is deemed incomplete until the applicant either: 1) enters into a remediation/settlement agreement with County (such remediation/settlement agreement shall be in full force and effect regardless of whether or not the County approves or denies the application); or, 2) all code enforcement proceedings are completed and all applicable penalties and fines are paid and/or all criminal proceedings are completed and all applicable penalties, fines and sentences are paid or fulfilled.

2.2.2 Oak Woodland Mitigation

In order to incentivize on-site retention of oak woodlands, mitigation for impacts to oak woodlands shall be based on the ratios presented in Table 3.

Table 3
Oak Woodland Mitigation Ratios

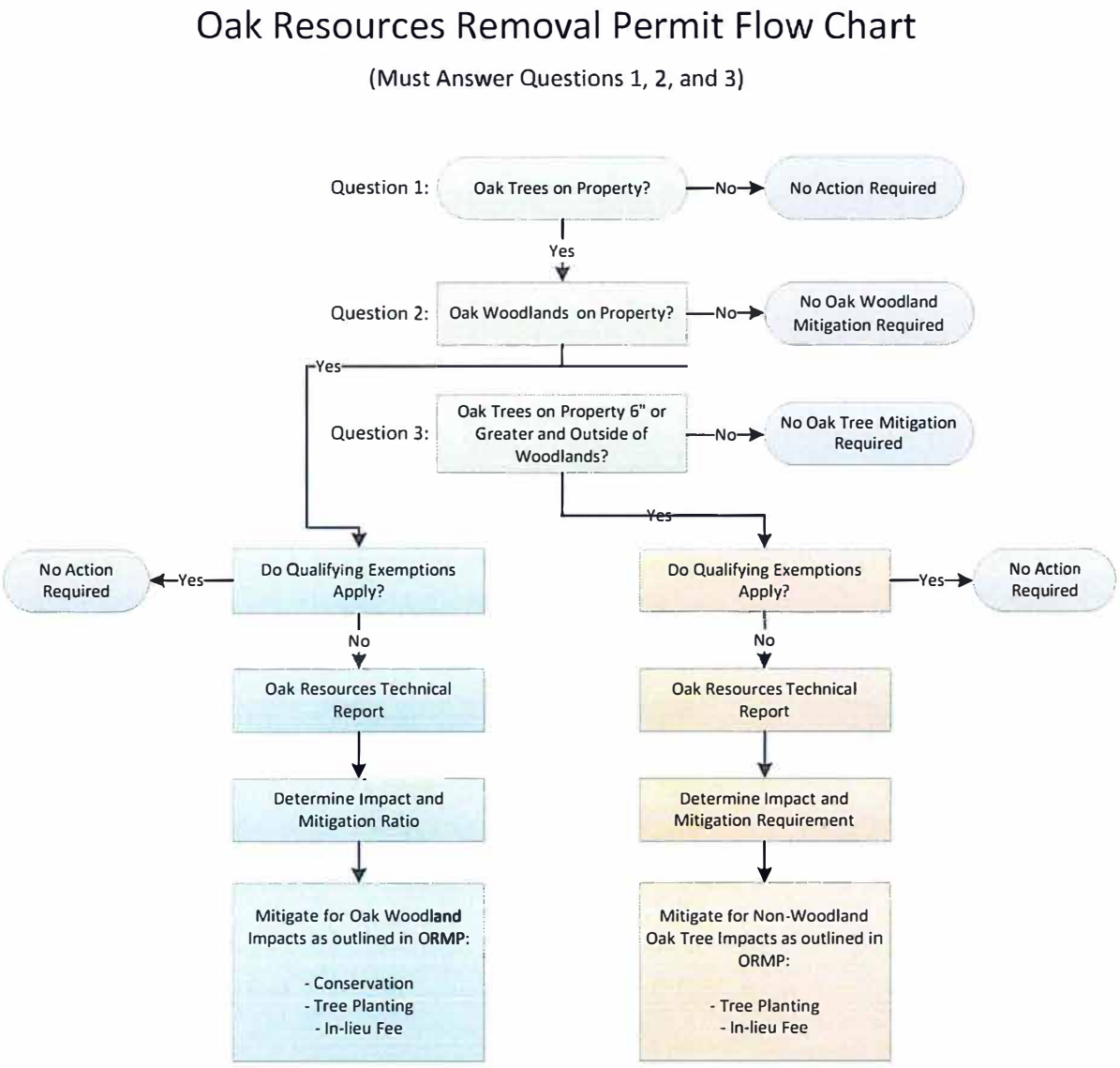
Percent of Oak Woodland Impact	Oak Woodland Mitigation Ratio
0-50%	1:1
50.1-75%	1.5:1
75.1-100%	2:1

Oak woodland impacts and mitigation shall be addressed in an oak resources technical report. As presented in Table 3, all of a project's oak woodland impacts shall be mitigated at a 1:1 ratio where 50 percent or less of on-site oak woodlands are impacted, all of a project's oak woodland impacts shall be mitigated at a 1.5:1 ratio where 50.1 to 75 percent of on-site oak woodlands are impacted, and all of a project's oak woodland impacts shall be mitigated at a 2:1 ratio where greater than 75 percent of on-site oak woodlands are impacted. Non-exempt County road projects shall provide oak woodland mitigation at a ratio of 1:1 regardless of the amount of onsite retention. A deed restriction or conservation easement shall be placed over retained on-site woodlands and those woodlands retained on site shall not be counted towards the impacted amount or towards the required mitigation. Mitigation for the impacted oak woodlands shall occur at the ratio required under Table 3 using one or more of the following options:

1. Off-site deed restriction or conservation easement acquisition and/or acquisition in fee title by a land conservation organization for purposes of off-site oak woodland conservation;
2. In-lieu fee payment 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;
3. Replacement planting on-site within an area subject to a deed restriction or conservation easement;
4. Replacement planting off-site within an area subject to a conservation easement; or
5. A combination of numbers 1 through 4 above.

Consistent with California PRC 21083.4, replacement planting shall not account for more than 50 percent of the oak woodland mitigation requirement.

Figure 1. Oak Resources Permitting and Mitigation Process



2.3 Individual Native Oak Tree and Heritage Tree Permits and Mitigation

The policy of the County is to preserve native oak trees when feasible, through the review of all proposed development activities where such trees are present on either public or private property, while at the same time recognizing individual rights to develop private property in a reasonable manner. As such, the County shall require mitigation for impacts to individual native oak trees and Heritage Trees.

2.3.1 Oak Tree Removal Permits

A tree removal permit shall be required for discretionary or ministerial (e.g., building permits) projects to authorize removal of any individual native oak tree not located within an oak woodland. A tree removal permit shall be required for removal of any Heritage Tree, regardless of location within or outside of an oak woodland. An oak resources technical report shall accompany any tree removal permit application submitted to the County. The County may impose such reasonable conditions of approval as are necessary to protect the health of existing oak trees, the public, and the surrounding property. Oak tree removal permit review will be integrated into the environmental review process for discretionary projects or may be processed as an administrative permit for ministerial projects. In addition to findings of consistency with the requirements and standards of this ORMP, the County shall make the following findings before approving an oak tree removal permit application:

- The proposed action is consistent with the General Plan; and
- The proposed action is specifically allowed by this ORMP and implementing ordinance.

All oak tree removal permits shall be processed according to Chapter 130.51 of County Code (General Application Procedures).

Commercial firewood cutting operations with impacts to individual native oak trees or Heritage Trees shall also require an oak tree removal permit if not approved under an oak woodland removal permit. In reviewing a tree removal permit application for commercial firewood cutting operations, the County shall consider the following:

- Whether the removal of the tree(s) would have a significant negative environmental impact;
- Whether the tree proposed for removal is a Heritage Tree;
- Whether replanting would be necessary to ensure adequate regeneration;
- Whether the removal would create the potential for soil erosion; and
- Whether any other limitations or conditions should be imposed in accordance with sound tree management practices.

Fines shall be issued to any person, firm, or corporation that is not exempt from the standards included in this ORMP who removes an oak tree without first obtaining an oak tree removal permit. Fines may be as high as three times the current market value of replacement trees, as well as the cost of replacement, and/or the cost of replacement of up to three times the number of

required replacement trees. In the case of unpermitted Heritage Tree removal, fines may be as high as 9 times the current market value of replacement trees, as well as the cost of replacement, and/or the cost of replacement of up to 9 times the number of required replacement trees. If individual native oak trees or Heritage Trees are impacted without an oak tree removal permit, in addition to issuing fines and penalties, any and all applications for development of that property shall be deemed incomplete unless and until the property owner enters into a settlement agreement with the County or all code enforcement and/or criminal proceedings are complete and all penalties, fines and sentences are paid or fulfilled. All monies received as fines for illegal oak tree and woodland removal shall be deposited in the County's Oak Woodland Conservation Fund.

Under penalty of perjury, a code compliance certificate shall be required to affirm no oak trees have been impacted (i.e., cut down) on the property that is the subject of an oak tree removal permit application within 2 years prior to the submission date of the application. If oak trees have been impacted then copies of all permits for such actions must be attached to the certification. If the certification is not included with the application then the application is incomplete. If oak trees have been impacted within the 2 year period without the proper permits then the application is deemed incomplete until the applicant either: 1) enters into a remediation/settlement agreement with County (such remediation/settlement agreement shall be in full force and effect regardless of whether or not the County approves or denies the application); or, 2) all code enforcement proceedings are completed and all applicable penalties and fines are paid and/or all criminal proceedings are completed and all applicable penalties, fines and sentences are paid or fulfilled.

2.3.2 Oak Tree Mitigation

Mitigation for removal of individual native oak trees shall be based on an inch-for-inch replacement standard (defined in Section 2.4, Replacement Planting Guidelines) and shall be quantified and outlined in an oak resources technical report (Section 2.5, Oak Resources Technical Reports). Mitigation for removal of Heritage Trees shall be based on an inch-for-inch replacement standard at a 3:1 ratio and shall also be quantified and outlined in an oak resources technical report.

Options for individual native oak tree and Heritage Tree impact mitigation requirements include:

1. Replacement planting on-site within an area subject to a deed restriction or conservation easement;
2. Replacement planting off-site within an area subject to a conservation easement or acquisition in fee title by a land conservation organization;
3. In-lieu fee payment 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; or
4. A combination of numbers 1 through 3 above.

Mitigation for individual native oak tree and/or Heritage Tree impacts shall be addressed in an oak resources technical report.

2.4 Replacement Planting Guidelines

This section provides guidelines for projects that elect to mitigate via replacement planting. Replacement plantings may be accepted if the replanting area can support oak resources (e.g., proper soil type and general environment). The intent is not to remove existing natural habitats for replacement plantings or to create a continuous canopy that would reduce wildlife value or contribute to increased fire hazard. Replacement plantings are subject to County approval and shall be completed as follows:

- Oak Woodland Impacts: For impacts to oak woodlands, planting density shall be based on recommendations made by a Qualified Professional and presented in an oak resources technical report. Planting density shall be documented in the oak resources technical report and shall be based on the density of impacted oak woodlands. Replacement trees shall be regularly monitored and maintained and shall survive for a period of 7 years, calculated from the day of planting. Acorns may be used instead of container trees. If acorns are used, they shall be planted at a 3:1 ratio as determined by the tree replacement formula. The replacement is as follows:

  Replacement planting with container trees (one-gallon or TreePot 4-sized container trees, that are locally sourced, shall follow this formula for ratios:

  (Impacted Oak Woodland Area in acres) x (Impacted Oak Woodland Density in trees/acre) = the total number of replacement trees to be replanted

  Replacement replanting by acorn shall be from locally-sourced acorns (acorns gathered locally). The replacement ratio by acorn replanting shall be obtained by the following formula

  (Impacted Oak Woodland Area in acres) x (Impacted Oak Woodland Density in trees/acre) x (3 acorns per tree) = the total number of acorns to be replanted

  This ORMP does not preclude over-planting so that the identified woodland density may be accomplished at the end of the 7-year maintenance, monitoring and reporting period. Replacement planting may use a combination of replacement tree sizes (one-gallon, TreePot 4, acorns) if consistency with these ratios is maintained and documented in an Oak Resources Technical Report. Replacement plantings shall be inspected, maintained and documented consistent with requirements for Mitigation Maintenance, Monitoring and Reporting.

- Individual Native Oak Tree and Heritage Tree Impacts: For impacts to individual native oak trees that are not otherwise mitigated, replacement planting shall be calculated based upon an inch-for-inch replacement of removed individual native oak trees. The total of replacement trees shall have a combined diameter of the tree(s) removed. Replacement tree species shall be the same proportion as those removed. Replacement trees shall be planted on-site and monitored and maintained for a period of 7 years, calculated from the day of planting, Replacement plantings shall be inspected, maintained and documented consistent with requirements for Mitigation Maintenance, Monitoring and Reporting.

  Replacement tree sizes may vary and may include acorn plantings, based on documentation of inch-for-inch replacement consistency included in an oak resources

technical report. Table 4 identifies replacement tree size options and associated quantity of trees, by size, required to meet the inch-for-inch replacement standard.

Table 4
Oak Tree Replacement Quantities

Replacement Tree Size	Number of Trees Required Per Inch of Trunk Diameter Removed
Acorn	3
1-gallon/TreePot 4	2
5-gallon	1.5*
15-gallon	1

**Quantity of replacement trees to be rounded up to the nearest whole number*

If acorns are used, they shall be planted at a 3:1 ratio (3 acorns for every 1-inch of trunk diameter removed) under the direction of a Qualified Professional. Acorn planting shall not exceed 25-percent of any project's tree planting total. If 1-gallon/TreePot 4-sized containers are used, they shall be planted at a 2:1 ratio (2 container trees for every 1-inch of trunk diameter removed). If 5-gallon-sized containers are used, they shall be planted at a 1.5:1 ratio (1.5 container trees for every 1-inch of trunk diameter removed). Finally, if 15-gallon-sized containers are used, they shall be planted at a 1:1 ratio (1 container tree for every 1-inch of trunk diameter removed).

The replacement planting area shall be suitable for tree planting, shall not conflict with current or planned land uses, and shall be large enough to accommodate replacement plantings up to a maximum density of 200 trees per acre. This ORMP does not preclude over-planting so that the minimum survival rate may be accomplished at the end of the 7-year maintenance and monitoring period. Replacement plantings shall be inspected, maintained and documented consistent with the requirements for Mitigation Maintenance, Monitoring and Reporting. For impacts to Heritage Trees, replacement planting shall adhere to the standards identified for individual native oak trees; however, replacement totals shall be calculated based upon an inch-for-inch replacement at a 3:1 ratio.

- On-Site Replacement Planting: On-site replacement trees are to be planted in compliance with the approved Oak Resources Technical Report or permit. The replacement planting area shall be suitable for tree planting, shall not conflict with current or planned land uses, and shall be large enough to accommodate replacement plantings at a density equal to the density of oak woodlands impacted, up to a maximum density of 200 trees per acre. A deed restriction or conservation easement to the satisfaction of County Counsel and the Director shall be required to ensure the long term conservation of any on-site replacement trees planted. The Conservation Easement shall be in favor of the County or a County-approved conservation organization. Replacement plantings shall be inspected, maintained, and documented consistent with the requirements for Mitigation Maintenance, Monitoring and Reporting.
- Off-Site Replacement Planting: The applicant may be permitted to procure an off-site planting area for replacement planting, preferably in proximity and/or in connection with oak woodlands contiguous to the project site or within or adjacent to a PCA or an

Important Biological Corridor as designated in the General Plan or important ecological area as identified in the Initial Inventory and Mapping (June 2010). The replacement planting area shall be suitable for tree planting, shall not conflict with current or planned land uses, and shall be large enough to accommodate replacement plantings up to a maximum density of 200 trees per acre. A conservation easement to the satisfaction of County Counsel and the Development Services Director shall be required to ensure the long term maintenance and preservation of any on-site replacement trees planted. The Conservation Easement shall be in favor of the County or a County approved conservation organization Replacement plantings shall be inspected, maintained and documented consistent with requirements for Mitigation Maintenance, Monitoring and Reporting.

- Replacement Planting Plans: Oak resources replacement planting plans shall be prepared for all replacement planting efforts (on- and off-site) by a Qualified Professional and may be prepared in conjunction with oak resources technical report. Replacement planting plans shall address the following:
    - Consistency with the accepted native oak tree planting standards, including those outlined in Regenerating Rangeland Oaks in California (McCreary 2009), How to Grow California Oaks (McCreary 1995), How to Collect, Store and Plant Acorns (McCreary undated), and other publications and protocols that may be established by the University of California, Division of Agriculture and Natural Resources.
    - The suitability of the site shall be demonstrated with soil information, aerial photography, or other resources.
    - The density of replanting shall be determined by the Qualified Professional, based on accepted practice and current research, up to a maximum density of 200 trees per acre.
    - The intent of the replacement planting plan is to provide replacement oak trees or acorns with a similar mix of species as those removed, however, the species may vary based on site specific conditions, as determined by the Qualified Professional.
    - Acorns or container trees for replanting shall be from local sources, when available, to maintain local genetic strains.
    - Replacement planting shall not be located within the 100-foot defensible space zone from an existing or proposed structure unless otherwise consistent with CAL FIRE's defensible space guidelines and fuels reduction requirements mandated under PRC 4291.
    - Replacement plantings shall be maintained in a manner determined by the Qualified Professional, based on the site-specific conditions, which may include weed control, irrigation, tree protection, pest management, and/or fertilization.
    - The replacement planting plan shall identify the frequency and methods of maintenance and monitoring, as well as contingencies or alternatives if the success criteria are not met annually or at the end of the monitoring term along with a means to ensure compliance with the replacement planting plan. The monitoring term shall be 7 years (PRC 21083.4).

- Best Management Practices (BMPs) for protection of retained oaks during and after construction (refer to Appendix D).
- An estimate of the total costs associated with implementation of the replacement plan.

2.5 Oak Resources Technical Reports

This section provides guidelines for projects that require preparation of an oak resources technical report. An oak resources technical report is a stand-alone report prepared by a Qualified Professional that includes the following:

- Identification, location, and quantification of all oak resources on the property:
  - Oak woodlands shall be mapped and assessed in accordance with the CDFG 2009 *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* and subsequent updates, and the *List of Vegetation Alliances and Associations* (CDFG 2010) and subsequent updates;
  - Data collected for individual native oak trees and Heritage Trees shall include: location, species, trunk diameter (dbh), height, canopy radius, and general health and structural condition;
- Identification and quantification of project-related impacts to oak resources;
- Measures identifying how specific trees and woodlands (or retained portions thereof) shall be protected during development and related work;
- Proposed actions to mitigate impacts to oak resources, consistent with the requirements included in this ORMP:
  - For replacement planting, the report shall provide detail regarding the quantity, location, planting density, replacement tree size(s), and acorn/seedling source consistent with the definition of Replacement Planting included in this ORMP;
  - For conservation easement placement/acquisition and/or land acquisition in fee title, the report shall provide documentation of easement placement on-site and/or documentation of easement or land acquisition off-site to the satisfaction of the County;
  - For in-lieu fee payment, the report shall document the quantity of impacts (acreage of oak woodlands and/or total diameter inches of individual native oak trees/Heritage Trees) and the total in-lieu fee payment necessary (presented separately for oak woodlands, individual native oak trees, and Heritage Trees, where applicable);
- Identification of responsible parties;
- Identification of maintenance, monitoring, and reporting requirements;
- Analysis of non-PCA conservation easement areas, where applicable;
- A site map(s) depicting the location of all oak woodlands, individual native oak trees, and Heritage Trees and the location of all proposed project-related improvements (including,

but not limited to, the limits of grading, fuel modification/defensible space areas, and above- and below-ground infrastructure). The site map(s) shall also clearly identify impacted oak resources.

2.6 Mitigation Program Flexibility

This ORMP provides for flexibility in meeting oak resources mitigation requirements. An applicant for a development project may comply with the provisions of this ORMP by combining mitigation options, except as specified for replacement planting to mitigate oak woodland impacts. Off-site mitigation may be accomplished through private agreements between the applicant and another private party consistent with the standards included in this ORMP and subject to approval by the County. When dedication of off-site conservation easements outside of PCAs is proposed by a developer, the proposed site shall be prioritized based on the standards set forth in this ORMP (Section 4.0, Priority Conservation Areas). A developer that dedicates a County-approved conservation easement is not subject to the acquisition component of the in-lieu fee, but is subject to the Initial and Long-Term Management and Monitoring and Administration components of the fee.

3.0 In-Lieu Fee

The methodology for determining the in-lieu fee for impacts to individual native oak trees and oak woodlands is provided in detail in Appendix B. In general, the in-lieu fee for oak woodlands is based on the costs of acquisition of land and conservation easements, along with management, monitoring, and administrative costs. For individual native oak trees, the in-lieu fee is based on an inch-for-inch replacement approach that accounts for costs associated with purchasing and planting 1-inch of trunk diameter.

3.1 Oak Woodlands

As noted, the in-lieu fee for impacts to oak woodlands is based on the costs of acquisition of land and conservation easements, along with management, monitoring, and administrative costs. A breakdown of costs per acre is provided in Table 5.

Table 5
Oak Woodland In-Lieu Fee

Activity	Cost per Acre
Acquisition	$4,400
Initial Management and Monitoring	$2,600
Long-Term Management and Monitoring	$890
Administration	$395
Total Cost per Acre	**$8,285**

Source: New Economics & Advisory Oak Resource In-Lieu Fee Nexus Study (June 2016)

The in-lieu fee payment option for impacts to oak woodlands shall be made at the ratio outlined in Table 3, which provides for a variable mitigation ratio depending on the percentage of oak woodland impacted on a project site. The County shall deposit all oak woodland in-lieu fees into its Oak Woodland Conservation Fund, which shall be used to fund the acquisition of land and/or conservation easements from willing sellers as described in Section 4.0 (Priority Conservation Areas). This fund shall also be used for ongoing monitoring and management activities, including but not limited to fuels treatment, weed control, periodic surveys, and reporting. It is anticipated that conservation easements and mitigation lands would be held by a land conservation organization; therefore, ongoing monitoring and management activities would be conducted by such organizations. Funding to support the negotiation of the purchase price and oversight of the land transaction is included in the management component of the oak woodland in-lieu fee.

If a project applicant independently negotiates purchase of a conservation easement with a willing seller to mitigate oak woodland impacts, the applicant shall be responsible for paying the Initial and Long-Term Management and Monitoring and Administration components of the Oak Woodland In-Lieu Fee to the County, unless the applicant also independently negotiates acceptance of the conservation easement management and monitoring with a land conservation organization approved by the County.

As costs change over time, there will be a need to adjust the fee to closely match future cost increases or decreases. Appendix B details the fee adjustment approach. A report regarding fee adjustments will be included in a report to be submitted to the Planning Commission and Board of Supervisors every other March, as described in Appendix A. The first fee adjustment study would occur at least 12 months after adoption of this ORMP.

3.2 Oak Trees

For individual native oak trees, the in-lieu fee is based on an inch-for-inch replacement approach that accounts for costs associated with purchasing and planting 1-inch of trunk diameter and maintaining those trees for a period of seven years.

The assumptions that factor into the in-lieu fee are:

1. Two 1-gallon/TreePot 4-sized container trees are assumed to represent one inch of trunk diameter. The acquisition and planting component of the per-inch mitigation fee is then based on the costs to purchase and plant two 1-gallon/TreePot 4-sized container trees.
2. To determine the per-inch fee, the median price of 1-gallon/TreePot 4-sized container trees was calculated from a survey of nurseries in El Dorado County and the surrounding region.
3. This price was then doubled for each tree to account for costs associated with planting. Doubling the per-tree cost to account for purchasing and planting a tree (inclusive of labor and materials) is a standard approach in the landscape/habitat restoration industry.
4. The management and monitoring component of the per-inch mitigation fee is based on annual costs associated with maintaining planted trees for a period of seven years. Data for this fee was derived from cost estimates provided by a habitat restoration contracting firm, Habitat Restoration Sciences, Inc.

Based on this analysis, the individual native oak tree mitigation fee was calculated to be $153.00 per-inch. In the case of Heritage Trees, the mitigation fee shall be $459.00 per-inch (3:1 ratio). Table 6 summarizes the cost breakdown associated with the in-lieu fee for individual native oak trees.

Table 6
Individual Oak Tree In-Lieu Fee

Activity	Cost per Inch
Acquisition and Planting	$31.90
Initial Management & Monitoring (Years 1-7)	$113.40
Administration (5%)	$7.27
Total Cost per Inch (non-Heritage Trees) (rounded to nearest whole dollar)	**$153**
Total Cost Per Inch (Heritage Trees – 3:1 Ratio)	**$459**

Source: New Economics & Advisory Oak Resource In-Lieu Fee Nexus Study (June 2016)

As described in this ORMP, this per-inch mitigation fee may be paid as mitigation for impacts to individual native oak trees or Heritage Trees. The per-inch fee shall be multiplied by the total number of trunk diameter inches removed (dbh). The County shall deposit all oak tree in-lieu

fees into its Oak Woodland Conservation Fund and shall use collected per-inch mitigation fees for native oak tree planting projects or may use such funds to acquire oak woodland conservation easements, with documentation that the number of diameter inches being acquired meets those for which mitigation fees have been paid.

3.3 Fee Adjustments, Reporting, and Findings

Appendix B details the annual inflation fee adjustment approach; however, as costs change over time, there will be a need to review and adjust the in-lieu fees to closely match future cost increases or decreases. Additionally, there are certain county and state reporting and finding requirements that the county will have to comply with after the in-lieu fee is adopted.

- Annual Inflation Adjustment: An annual adjustment for cost escalations influenced by changes in land values affecting acquisition, conservation easement values, as well as property tax obligations and organizational overhead costs (e.g. rent, wages, benefits, equipment, etc.) shall be applied to the Oak Woodland In-Lieu Fees. The Individual Oak Tree In-Lieu Fees shall be subject to an annual inflation fee that accounts for changes in acquisition/planting and management/monitoring costs.

- Annual Monitoring and Reporting (Oak Tree/Oak Woodland Removal Permits and Enforcement Actions) (Ordinance Code Section 130.39.090 A.)

- Biennial Reporting (Oak Woodland Conservation Fund Fee documentation, evaluation and recommendation regarding fee adjustment, if any) (Ordinance Code Section 130.39.090 B.)

- Mitigation Fee Act annual reporting requirement (Government Code Section 66006)

- Mitigation Fee Act 5-year findings (Government Code Section 66001)

4.0 Priority Conservation Areas

4.1 Identification of Priority Conservation Areas

Figure 2 identifies the areas in which acquisition of land or conservation easements from willing sellers shall be prioritized using the Oak Woodland Conservation Fund generated by the payment of the in-lieu fees described above. These areas were identified using the FRAP classification of oak woodland habitat in the county. After those areas were mapped, the areas were narrowed down to large expanses consisting of 500 acres or more. Those large expanses were further narrowed to lands where oak woodland habitat would not likely undergo substantial fragmentation and oak woodland conservation would be consistent with the 2004 General Plan land use designations. Areas specifically excluded were lands within Community Regions and Rural Centers and lands designated Low Density Residential. These resulting areas are classified as Priority Conservation Areas (PCAs).

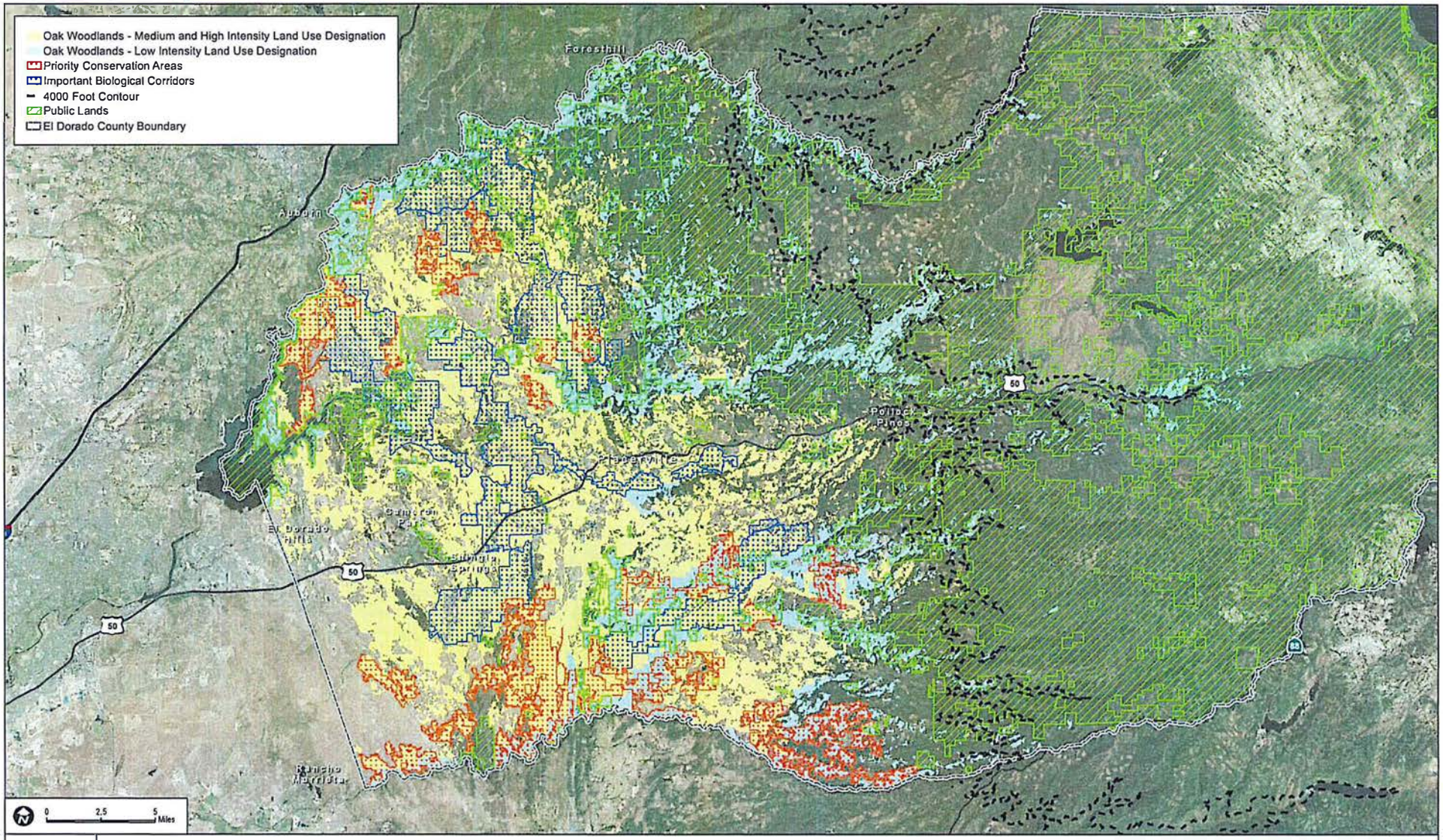
The 500-acre PCAs are generally made up of 40-acre and larger privately owned parcels. A breakdown of parcel sizes within the large expanses is shown in Table 7. A more detailed description of the mapping process and data used to identify PCAs is provided in Appendix A. Figure 2 also shows existing public lands with oak woodlands contiguous to the PCAs.

Table 7
PCA Parcel Statistics

Parcel size (Acres)	Number of Parcels	Acres
40-60	170	7,666.3
60.1-120	155	13,176.7
120.1-340	175	31,674.3
340.1+	29	13,535.5
Total	***529***	***66,052.8***
	Avg. Size	**124.9**
	Median Size	**84.3**

Acquisition of land or conservation easement must be configured in such a manner as to preserve the integrity of the oak woodland ecosystem. Priority should be given to conserving oak woodland habitat within PCAs, particularly areas that are adjacent to existing woodlands lying west of the National Forest within the Important Biological Corridor overlay, under a conservation easement, on public lands, in open space lands, in riparian corridors, or ecological preserves.

Oak woodlands within the PCAs will be conserved to mitigate for losses of oak woodlands. Prioritization within the PCAs will be given to areas that provide a diversity of oak woodland types. The acreage of oak woodlands conserved will include areas conserved by developers under private conservation agreements and those conserved by the County using Oak Woodland Conservation Funds.



DUDEK

6229-01

SOURCE: Bing Maps 2014; FRAP 2006; El Dorado County 2014

FIGURE 2

Priority Conservation Areas, Oak Woodlands, and Public Lands in El Dorado County

Draft Oak Resources Management Plan

This ORMP establishes a strategy for conserving oak woodland habitat to offset the effects of increased habitat loss and fragmentation elsewhere in the county. Identification of PCAs and standards for prioritizing conservation of oak woodlands outside of PCAs (Section 4.3, Conservation Outside of PCAs) fulfills the oak woodlands portion of the conservation requirements outlined in General Plan Policy 7.4.2.8.

4.2 Management of PCAs

Existing oak woodlands within the PCAs identified as mitigation for project impacts, whether on or off a project site, will be protected from further development through a conservation easement granted to the County or a land conservation group approved by the County or by acquisition in fee title by a land conservation group or acquisition in fee title by the County. Management activities would be conducted by land conservation organizations and may include, but are not limited to, one or more of the following activities, as determined appropriate and/or necessary through monitoring of the sites: inspections, biological surveys, fuels treatment to reduce risk of wildfire and to improve habitat, weed control, database management, and mapping. Agricultural use (i.e., grazing) shall be allowed in conserved oak woodlands as long as the activity occurred at the time the conservation easement is established, the spatial extent of the agricultural use is not expanded on conserved lands, and the agricultural use does not involve active tree harvest or removal (e.g., fuelwood operations, land clearing for crop planting, etc.).

4.3 Conservation Outside of PCAs

The PCAs have been delineated to prioritize the acquisition of land or oak woodland conservation easements either by the County (using the funds collected in the County's Oak Woodland Conservation Fund) or privately by developers. However, acquisition of land or oak woodland conservation easements outside of the PCAs may also occur on minimum contiguous habitat blocks of 5 acres, as described below. The following criteria shall be used for selecting potential oak woodlands conservation lands or easements outside of PCAs, consistent with General Plan Policy 7.4.2.8 (D):

- Location within IBCs;
- Location within other important ecological areas as identified in the Initial Inventory and Mapping (June 2010);
- Woodlands with diverse age structure;
- Woodlands with large trees and dense canopies;
- Opportunities for active land management to be used to enhance or restore natural ecosystem processes;
- Potential to support special-status species;
- Connectivity with adjacent protected lands;
- Parcels that achieve multiple agency and community benefits;
- Parcels that are located generally to the west of the Eldorado National Forest; and

- Parcels that would preserve natural wildlife movement corridors such as crossings under major roadways (e.g., U.S. Highway 50 and across canyons).

Land or conservation easement acquisition that occur outside of PCAs shall occur on minimum contiguous habitat blocks of 5 acres (the acquired land or conservation easement shall be contiguous to or shall create a contiguous area of no less than 5 acres of oak woodland in conserved or open space status (e.g., parks, national forest, other conserved oak woodlands on private property)). For transactions where land is acquired or a conservation easement outside of the PCAs is negotiated between a developer and a private seller, an analysis of the proposed oak woodland conservation area shall be performed by a Qualified Professional. The Qualified Professional shall demonstrate that the proposed conservation area is of equal or greater biological value as the oak woodland proposed to be removed. The analysis of conservation areas shall be included as a component of an oak resources technical report.

Should the County elect to purchase land or oak woodlands conservation easements outside of PCAs using funds from its Oak Woodland Conservation Fund, an analysis of the proposed oak woodland conservation area shall be performed by a Qualified Professional to determine its suitability in meeting the criteria listed above.

4.4 Conservation Easements

Where the mitigation requirements of this ORMP are met through conservation easements for oak woodlands, whether within or outside of PCAs, the conservation easement shall be granted in perpetuity to the County or a land conservation group approved by the County. The easement shall be provided on a form approved by the County and shall be accepted by the Board prior to issuance of a grading or building permit, filing of a parcel or final map, or otherwise commencing with the project.

4.5 Deed Restrictions

Where the mitigation requirements of this ORMP are met through deed restrictions for oak woodlands, whether within or outside of PCAs, the deed restriction shall commit the property to oak woodland conservation use in perpetuity. The deed restriction shall be recorded with the County Clerk/Recorder prior to issuance of a grading or building permit, filing of a parcel or final map, or otherwise commencing with the project.

5.0 Application of ORMP to Development Review Process

Applicability of the ORMP to a development project shall be made as follows:

1. Oak resources are mapped, quantified, and categorized (oak woodland, individual native oak tree, and/or Heritage Tree) by a Qualified Professional hired by the applicant and documented in an oak resources technical report.
2. Oak resources impacts are quantified in the oak resources technical report. Oak resources impacts are calculated by identifying all disturbed areas as proposed, including:
    a. Roads, driveways, and access drives;
    b. Graded areas for building pads, parking lots, staging areas, and other improvements; and
    c. Other disturbed areas resulting in oak resources impacts including septic system leach fields, above- and below-ground utilities, and defensible space vegetation removal for new construction.
3. The proposed oak woodland impact area is compared with the total on-site oak woodland area to determine the appropriate mitigation ratio.
4. Impacts to individual native oak trees and/or Heritage Trees are determined and the sum of impacted trunk diameter (dbh) calculated.
5. If applicable, the applicant proposes mitigation for impacts to oak woodlands in an oak resources technical report by one of the following mechanisms:
    a. Deed restriction and/or conservation easement dedication (on-site), conservation easement acquisition (off-site), acquisition in fee title by a land conservation organization (on-site and/or off-site);
    b. In-lieu fee payment at the ratio determined by percentage of on-site oak woodland impact and based on the currently-adopted per-acre fee amount with the fee 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;
    c. Replacement planting on-site within an area subject to a deed restriction or conservation easement;
    d. Replacement planting off-site within an area subject to a conservation easement or acquisition in fee title by the County or a County-approved land conservation organization; or
    e. A combination of two or more of the above provisions.

    In no case shall replacement planting exceed 50 percent of oak woodland mitigation requirement.
6. If applicable, the applicant proposes mitigation for impacts to individual native oak trees and/or Heritage Trees in an oak resources technical report by one of the following mechanisms:

a. Replacement planting on-site within an area subject to a deed restriction or conservation easement;

b. Replacement planting off-site within an area subject to a conservation easement or acquisition in fee title by the County or a County-approved land conservation organization;

c. In-lieu fee payment for all diameter inches removed (dbh), or 3 times the total diameter inches removed for Heritage Trees, and based on the currently-adopted per-inch fee amount with the fee 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; or

d. A combination of two or more of the above provisions.

7. Payment of applicable in-lieu fees and establishment of any required deed restrictions and/or granting of any required conservation easements and/or land acquisition in fee title shall be required as a condition of approval of all discretionary or ministerial permits for which these provisions apply, and shall be completed prior to issuance of a grading or building permit, filing of a parcel or final map, or otherwise commencing with the project. The payment of in-lieu fees may be phased to reflect the timing of the oak resources removal/impact. For phasing, permits issued for oak resources removal shall only be for the area covered by the fee payment.

8. Payment of in-lieu fees and establishment of any required deed restrictions and/or granting of any required conservation easements and/or land acquisition in fee title, if necessary, shall be completed prior to issuance of a building or grading permit for ministerial projects.

6.0 Definitions

For the purposes of this ORMP, the following terms and phrases shall have the meanings respectively ascribed to them by this section:

Agricultural Conversion: As defined by General Plan Policy 7.1.2.7.

Agricultural Cultivation/Operations: As defined by General Plan Policy 8.2.2.1.

Agricultural Lands: As defined by General Plan Policies 2.2.1.2 and 8.1.1.8, and further, Policy 8.2.2.1.

Arborist: A person certified by the International Society of Arboriculture (ISA) that provides professional advice regarding trees in the County.

CAL FIRE: California Department of Forestry and Fire Protection.

Commercial Firewood Cutting: Fuel wood production where a party cuts firewood for sale or profit.

Conservation Easement: An easement granting a right or interest in real property that is appropriate to retaining land or water areas predominately in their natural, scenic, open, or wooded condition; retaining such areas as suitable habitat for fish, plants, or wildlife; or maintaining existing land uses.

For conservation easement dedication (on-site) or acquisition (off-site) as mitigation for oak woodland impacts, a conservation easement to the satisfaction of County Counsel and the Development Services Director shall be required to ensure the long term maintenance and preservation of oak woodlands. The conservation easement shall provide for the preservation of the designated area in perpetuity and shall include such terms, conditions, and financial endowments for monitoring and management deemed necessary by the County to ensure the long term preservation of the oak woodland within the easement area. The conservation easement shall be in favor of the County or a County-approved conservation organization.

Construction/Disturbance Area: Any area in which movement of earth, alteration in topography, soil compaction, disruption of vegetation, change in soil chemistry, and any other change in the natural character of the land occurs as a result of site preparation, grading, building construction or any other construction activity.

Deed Restriction: Private agreements that restrict the use of the real estate and are listed in the deed. Restrictions travel with the deed, and cannot generally be removed by new owners.

Defensible Space: The area within the perimeter of a parcel, development, neighborhood or community where basic wildland fire protection practices and measures are implemented, in order to defend against encroaching wildfires or provide for people to escape structure fires.

Defensible space is required by any person who owns, leases, controls, operates or maintains a building or structure in or adjoining any mountainous area, forest-covered lands, brush-covered

lands, grass-covered lands or any land that is covered with flammable material. PRC 4291 requires 100 feet of Defensible Space (or to the property line if less than 100 feet) from every building or structure that is used for support or shelter of any use or occupancy.

Diameter at Breast Height (dbh): The measurement of the diameter of a tree in inches, specifically four (4) feet six (6) inches above natural grade on the uphill side of the tree. In the case of trees with multiple trunks, the diameter of all stems (trunks) at breast height shall be combined to calculate the diameter at breast height of the tree.

Fire Safe Plan: Defined in the El Dorado County General Plan (Policy 6.2.2.2) as a plan prepared by a Registered Professional Forester (RPF) and approved by the local Fire Protection District and/or California Department of Forestry and Fire Protection. The plan is prepared to demonstrate that development can be adequately protected from wildland fire hazard in areas of high and very high wildland fire hazard or in areas identified as "urban wildland interface communities within the vicinity of Federal lands that are a high risk for wildfire," as listed in the Federal Register of August 17, 2001.

Habitat: The physical location or type of environment in which an organism or biological population lives or can be found.

Heritage Trees: Any live native oak tree of the genus *Quercus* (including blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*), California black oak (*Quercus kelloggii*), interior live oak (*Quercus wislizeni*), canyon live oak (*Quercus chrysolepis*), Oregon oak (*Quercus garryana*), oracle oak (*Quercus x morehus*), or hybrids thereof) with a single main trunk measuring 36 inches dbh or greater, or with a multiple trunk with an aggregate trunk diameter measuring 36 inches or greater.

Impact: For individual native oak trees, the physical destruction, displacement or removal of a tree or portions of a tree caused by poisoning, cutting, burning, relocation for transplanting, bulldozing or other mechanical, chemical, or physical means. For oak woodlands, tree and land clearing associated with land development, including, but not limited to, grading, clearing, or otherwise modifying land for roads, driveways, building pads, landscaping, utility easements, fire-safe clearance and other development activities.

In-lieu Fee: Cash payments that may be paid into the County's Oak Woodland Conservation Fund by an owner or developer as a substitute for deed restriction or conservation easement or replacement planting. In-lieu fee amounts for individual native oak trees, Heritage Trees, and oak woodlands are presented in this ORMP and may be adjusted by the County over time to reflect changes in land values, labor costs, and nursery stock costs.

Individual Native Oak Trees: Any live native oak tree of the genus *Quercus* (including blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*), California black oak (*Quercus kelloggii*), interior live oak (*Quercus wislizeni*), canyon live oak (*Quercus chrysolepis*), Oregon oak (*Quercus garryana*), oracle oak (*Quercus x morehus*), or hybrids thereof) with a single main trunk measuring greater than 6 inches dbh, or with a multiple trunk with an aggregate trunk diameter measuring greater than 10 inches dbh and is not a Heritage Tree.

Mitigation Maintenance, Monitoring and Reporting: Required care, inspection and documentation of Replacement Trees, including acorns, when planted as mitigation for loss of oak woodlands, loss of individual native oak tree(s) or Heritage Tree(s) as defined in the ORMP. Mitigation maintenance, monitoring and reporting shall contain the following elements:

1) Annual monitoring and maintenance of Replacement Trees during the 7-year period after planting in which any trees that do not survive during this period are replaced as needed by the responsible party listed on the Oak Tree or Oak Woodland Removal Permit for a period of 7 years from the date of planting,

2) Monitoring reports documenting the success of Replacement Tree planting submitted to the County at the following intervals:

- Oak Woodland Mitigation: Annually and at the conclusion of the 7-year period after planting (see definition of "Monitoring Report" in this section).

- Individual Native Oak Tree and Heritage Tree Mitigation: At the conclusion of the 7-year period after planting (see definition of "Monitoring Report" in this section).

Monitoring Report: A report prepared by a Qualified Professional documenting site observations and replacement planting survival totals for oak resources mitigation efforts. A Final Monitoring Report is one prepared at the end of the 7-year maintenance and monitoring period that summarizes replacement planting survival totals. All Final Monitoring Reports shall contain contingencies or alternatives if the success criteria for replantings, as determined by a Qualified Professional, have not been met at the end of the monitoring term, along with a means to ensure compliance with the replacement planting plan. A copy of the Final Monitoring Report shall be submitted to the County.

Oak Resources: Collectively, oak woodlands, individual native oak trees, and Heritage Trees.

Oak Resources Impacts: For individual native oak trees and Heritage Trees, removal or actions that cause the death of the tree shall constitute an impact. For oak woodlands, the oak woodland acreage that occurs within project-related disturbance areas shall be considered impacted.

Oak Tree Removal Permit: A permit issued by the County allowing removal of individual native oak trees not located within an oak woodland. An oak resources technical report shall accompany any tree removal permit application submitted to the County. Conditions of approval may be imposed on the permit. If a tree removal permit application is denied, the County shall provide written notification, including the reasons for denial, to the applicant. Oak tree removal permit processing and approval will be conducted concurrently with the environmental review process for discretionary projects or concurrent with other permit review and processing for ministerial projects (e.g., building permits).

Oak Woodland Conservation Fund: A fund set up by the County to receive in-lieu fees (Oak Woodland In-Lieu Fee and Individual Tree In-Lieu Fee) which shall be used to fund the acquisition of land and/or oak woodland conservation easements from willing sellers, native oak tree planting projects, and ongoing conservation area monitoring and management activities, including but not limited to fuels treatment, weed control, periodic surveys, and reporting.

Oak Woodlands: An oak stand with a greater than 10 percent canopy cover or that may have historically supported greater than 10 percent canopy cover (California Fish and Game Code Section 1361).

Oak Woodland Removal Permit: A permit issued by the County allowing removal of oak trees that are a component of an oak woodland. An oak resources technical report shall accompany any oak woodland removal permit application submitted to the County. Conditions of approval may be imposed on the permit. If an oak woodland removal permit application is denied, the County shall provide written notification, including the reasons for denial, to the applicant. Oak woodland removal permit processing and approval will be conducted concurrently with the environmental review process for discretionary projects or concurrent with other permit review and processing for ministerial projects (e.g., building permits).

Qualified Professional: An arborist certified by the International Society of Arboriculture (ISA), a qualified wildlife biologist, or a registered professional forester (RPF).

Qualified Wildlife Biologist: A professional with a BA or BS or advanced degree in biological sciences or other degree specializing in the natural sciences; professional or academic experience as a biological field investigator, with a background in field sampling design and field methods; taxonomic experience and knowledge of plant and animal ecology; familiarity with plants and animals of the area, including the species of concern; and familiarity with the appropriate county, state, and federal policies and protocols related to special status species and biological surveys.

Registered Professional Forester (RPF): A Registered Professional Forester (RPF) is a person licensed by the State of California to perform professional services that require the application of forestry principles and techniques to the management of forested landscapes. RPFs have an understanding of forest growth, development, and regeneration; soils, geology, and hydrology; wildlife and fisheries biology and other forest resources. RPFs are also trained in fire management and, if involved in timber harvesting operations, have expertise in both forest road design and application of the various methods used to harvest.

Replacement Tree: A tree planted as mitigation for oak resources impacts. For oak woodland impact mitigation, replacement trees include container tree stock (1-gallon/TreePot 4 size) and acorns. If acorns are used, the planting ratio shall be 3:1 as compared with container tree stock. For individual native oak tree (including Heritage Tree) impact mitigation, replacement tree sizes may vary and may include the following: 1-gallon/TreePot 4, 5-gallon, or 15-gallon. Documentation of inch-for-inch replacement consistency shall be included in an oak resources technical report and shall be based on the following ratios: 1-gallon/TreePot 4 (2:1), 5-gallon (1.5:1), and 15-gallon (1:1). Acorns and container stock shall be locally-sourced (from within El Dorado County).

Sensitive Habitat: In El Dorado County, this includes the following habitat types: montane riparian, valley-foothill riparian, aspen, valley oak woodland, wet meadow, and vernal pools, as defined in the 2004 El Dorado County General Plan EIR.

Woodland Habitats: Biological communities that range in structure from open savannah to dense forest. In El Dorado County, major woodland habitats include blue oak-foothill pine, blue oak woodland, montane hardwood, montane hardwood-conifer, and valley oak woodland.

Appendix A

Oak Resources Management Plan
Background and Support Information

This page intentionally left blank.

El Dorado County
Oak Resources Management Plan
Background and Support Information

September 2017

El Dorado County Community Development Agency
Long Range Planning Division
2850 Fairlane Court
Placerville, CA 95667

In association with

Dudek

853 Lincoln Way, Suite 208
Auburn, CA 95603

This page intentionally left blank.

Oak Resources Management Plan Background and Support Information
Appendix A

Table of Contents

1. Oak Resources in El Dorado County A-1
1.1 Oak Woodland Habitats A-1
1.1.1 Oak Woodland Types A-2
1.1.1.1 Blue Oak Woodland (BOW) A-2
1.1.1.2 Blue Oak-Foothill Pine (BOP) A-3
1.1.1.3 Montane Hardwood (MHW) A-3
1.1.1.4 Montane Hardwood-Conifer (MHC) A-3
1.1.1.5 Valley Oak Woodland (VOW) A-4
1.1.2 Current Distribution of Oak Woodland Types A-4
1.1.3 Historic Distribution A-4
1.1.4 Existing Threats A-5
1.1.5 Natural Regeneration A-6
1.2 Individual Tree Species A-7
1.2.1 Oak Species A-7
1.2.1.1 Canyon Live Oak A-8
1.2.1.2 Blue Oak A-8
1.2.1.3 Oregon White Oak A-8
1.2.1.4 California Black Oak A-8
1.2.1.5 Valley Oak A-9
1.2.1.6 Interior Live Oak A-9
1.2.1.7 Oracle Oak A-9
1.2.2 Non-Oak Species A-9
2.0 Natural Resource Values of Oak Resources A-11
2.1 Wildlife A-11
2.2 Special-Status Species A-12
2.3 Recreation and Open Space A-18
2.4 Health and Function of Local Watersheds A-19

2.5 Soil and Water Retention A-20
2.6 Reduction of Fuel Loads A-20
2.7 Effects from Loss of Oak Woodlands A-20
2.7.1 Wildlife Habitat A-21
2.7.2 Fragmentation A-21
2.7.3 Retention of Soil and Water A-22
3.0 Economic Value of Oak Resources A-23
3.1 Support of Important Economic Activities A-23
3.2 Contribution to Land Value A-23
3.3 Contribution to Ecosystem Function A-24
4.0 Priority Conservation Areas A-25
4.1 Priority Conservation Area Mapping A-25
4.1.1 Mapping Data Sets A-26
4.1.1.1 Oak Woodland Data A-26
4.1.1.2 Other Relevant Data A-26
4.1.2 Large Expanses of Oak Woodland A-26
4.1.3 Initial Mapping of Priority Conservation Areas A-27
4.1.4 Finalization of Priority Conservation Areas A-28
4.2 Current Oak Woodland Acreage in Priority Conservation Areas A-29
4.3 Criteria for Conservation Outside of Priority Conservation Areas A-30
5.0 Thresholds of Significance for the Loss of Oak Resources A-34
6.0 Mitigation for the Loss of Oak Resources A-35
7.0 Resources... ..... A-36
8.0 Monitoring and Reporting A-38
8.1 Replacement Plantings A-38
8.2 Status Reports to Board of Supervisors A-39
8.3 Adaptive Management A-39
9.0 Administration of the Oak Woodland Conservation Program A-40
10.0 Education and Outreach A-41
11.0 Partnering to Achieve Goals of the ORMP A-42
11.1 Governmental Partners A-43

11.2 Public Utility Partners A-48
11.3 Private Partners A-49
11.4 Non-profit Partners A-49
12.0 Consistency with the General Plan and State Law A-50
12.1 ORMP as the Oak Resources Component of the County's Biological Resources Mitigation Program A-50
12.2 Consistency with Measure CO-P A-50
12.3 Compliance with Fish & Game Code Section 1366 (a) A-51
12.4 Compliance with PRC 21083.4 ..... A-51
12.5 Effect of Future Amendments to General Plan A-51
13.0 List of Preparers A-52
14.0 Acronyms A-53

List of Tables

Table 1-1: Acreage of Oak Woodland Types in the ORMP Area (2015 FRAP Data) .. A-1
Table 1-2: Native Oak Tree Species within the ORMP Area A-7
Table 2-1: Special-Status Plants Occurring or Potentially Occurring in the ORMP Area A-13
Table 2-2: Special-Status Wildlife Potentially Occurring in the ORMP Area..... A-15
Table 4-1: Parcel Size A-27
Table 4-2: Land Use Designation A-28
Table 4-3: Oak Woodlands in Priority Conservation Areas A-30

List of Figures

Figure A-1: Oak Woodland Distribution in ORMP Area..... A-32

This page intentionally left blank.

This Oak Resources Management Plan (ORMP) Background and Support Information appendix is based on currently-available data and research. As new resource data and scientific research becomes available, the ORMP will be updated to incorporate new and relevant information. The planning area covered by the ORMP (ORMP area) is approximately 560,000 acres and is that area bordered by the County's administrative boundary to the north, west, and south and the 4,000-foot elevation contour to the east.

1.0 Oak Resources in El Dorado County

The term "oak woodlands" is defined in the Oak Woodlands Conservation Act (Article 3.5 (commencing with Section 1360) of Chapter 4 of Division 2 of the Fish and Game Code) as "an oak stand with a greater than ten percent canopy cover or that may have historically supported greater than ten percent canopy cover." The following sections provide greater detail regarding the oak woodland types and individual tree species present in El Dorado County, as well as state-level oak woodland habitat mapping data that was used in preparation of this ORMP.

1.1 Oak Woodland Habitats

Based on the oak woodland mapping data available via the California Department of Forestry and Fire Protection's (CAL FIRE) Fire and Resource Assessment Program (FRAP) data set, six oak woodland types are identified within the ORMP area: blue oak woodland (BOW), blue oak-foothill pine (BOP), valley oak woodland (VOW), montane hardwood (MHW), montane hardwood-conifer (MHC), and coastal oak woodland (COW) (CAL FIRE 2015). These oak woodland types are part of the California Wildlife Habitat Relationships (CWHR) classification scheme (Mayer and Laudenslayer 1988) which classifies existing vegetation types important to wildlife and was developed to recognize and logically categorize major vegetative complexes at a scale sufficient to predict wildlife-habitat relationships. The 2002 version of the FRAP data (CAL FIRE 2002) was analyzed in the County's 2004 General Plan EIR (El Dorado County 2003). A more recent version of the FRAP data (2015) with higher spatial resolution (30 meters, as compared with 100 meters) was used in preparation of this ORMP. The acreage of these oak woodland types within the ORMP area is presented in Table 1-1.

Table 1-1
Acreage of Oak Woodland Types in the ORMP Area
(2015 FRAP Data)

Oak Woodland Type	CWHR Code	Acreage	Percent
Blue oak woodland	BOW	46,521	18.9%
Blue oak-foothill pine	BOP	64,740	26.2%
Coastal oak woodland	COW	2	<0.1%
Montane hardwood	MHW	98,930	40.1%
Montane hardwood-conifer	MHC	32,643	13.2%
Valley oak woodland	VOW	3,970	1.6%
	Total:	**246,806**	**100%**

While coastal oak woodland is identified in the 2015 FRAP vegetation data set for the ORMP area, its presence is unlikely given the range of its dominant tree species (coast live oak (*Quercus agrifolia*)). This classification is possibly the result of image processing error encountered during creation of the 2015 FRAP data set. The sole location of coastal oak woodland in the ORMP area (approximately 2 acres) is surrounded by blue oak woodland and blue oak-foothill pine vegetation types and most of the area was previously mapped as montane hardwood or montane hardwood-conifer in the 2002 version of the FRAP data. Given its previous mapping designation, location, and adjacent vegetation types, the coastal oak woodland area included in the 2015 FRAP data is likely montane hardwood or montane hardwood-conifer and will be considered an oak woodland type for the purposes of this ORMP. However, other than the identification of mapped acreage in Table 1-1, coastal oak woodland is not discussed further in this ORMP.

Montane hardwood is the most represented oak woodland type throughout the ORMP area. Blue oak woodland, blue oak-foothill pine, and valley oak woodland are more prevalent below 2,000 feet. Montane hardwood-conifer is more prevalent above 2,000 feet and transitions to conifer-dominated vegetation types. Valley oak woodland is classified as a sensitive habitat by both the California Natural Diversity Database (CNDDB) and CWHR, and is listed as a high-priority community for inventory by the CNDDB. Finally, while this ORMP discusses oak woodland habitats as mapped by FRAP, the presence of oak woodlands in other non-oak woodland vegetation types may occur. For example, a stand of oak trees with greater than 10% canopy cover may occur within an area mapped as Sierran mixed conifer (SMC). This may occur due to the scale of the vegetation type mapping data and the remote sensing techniques employed in vegetation type classification. The following sections describe the five CWHR oak woodland vegetation type classifications addressed in this ORMP.

1.1.1 Oak Woodland Types

1.1.1.1 Blue Oak Woodland (BOW)

Blue oak woodland is usually associated with shallow, rocky, infertile, well-drained soils. Within the County, BOW usually occurs primarily below 2,000 feet in elevation but can extend up to 3,000 feet. BOW commonly forms open savannah-like stands with little or no shrub understory on dry ridges and gentle slopes. The canopy typically becomes denser on better quality sites. Ground cover in BOW is comprised mainly of annual grasses. Shrubs are seldom extensive and often occur near rock outcrops. Shrub associates include California buckeye, poison oak, hoary coffeeberry, and buckbrush. BOW usually intergrades with annual grasslands and valley oak woodlands at lower elevations and blue oak-foothill pine woodlands at higher elevations. In El Dorado County, BOW and blue oak-foothill pine woodlands tend to be intermixed.

Interior live oak, canyon live oak, California buckeye, and valley oak trees are common associates in blue oak woodland. Interior live oak and canyon live oak trees can be the dominant species where they may be considered as distinct habitats. Interior live oaks are often associated with river floodplains, low foothills, and upland slopes. In low-elevation foothill woodlands, interior live oaks occur as widely spaced trees or clumps that may be concentrated around rock outcrops. Interior live oak becomes a more significant part of the blue oak woodland canopy with

increasing elevation, particularly on north-facing slopes. Canyon live oaks are found on low foothills, mountain canyons, upland slopes, and exposed ridges.

The CWHR description for BOW can be found here.

1.1.1.2 Blue Oak-Foothill Pine (BOP)

Blue oak-foothill pine is typically found on well-drained soils rich in rock fragments, generally in hilly, dry terrain. Compared with BOW, BOP generally is found on steeper and drier slopes with shallower soils. BOP merges with annual grasslands, blue oak woodlands, valley oak woodlands, and mixed chaparral (including the northern gabbroic chaparral). BOP is characterized by a mixture of hardwoods, conifers, and shrubs. Blue oak is usually most abundant with the taller foothill pine dominating the overstory. Foothill pine becomes more prevalent at higher elevations. Associated tree species include interior live oak and California buckeye. Interior live oak becomes more abundant on shallower soils, steeper slopes, and at higher elevations. Canyon live oaks are present on low foothills, mountain canyons, upland slopes, and exposed ridges.

The shrub component associated with BOP is typically composed of several species that tend to clump and are interspersed with annual grasses. Shrub species include buckbrush, whiteleaf manzanita, hoary coffeeberry, poison oak, redbud, and yerba santa. Shrubs are less prevalent at lower elevations.

The CWHR description for BOP can be found here.

1.1.1.3 Montane Hardwood (MHW)

Montane hardwood has a relative overstory cover by hardwoods of at least 50% and a relative overstory cover by conifers of less than 25%. Canopy cover ranges from dense to open. This woodland type typically has a poorly developed shrub layer that contains snowberry, wood rose, currant, manzanita, and poison oak. Additionally, MHW typically has a sparse herbaceous layer in its understory. At lower elevations, MHW merges with mixed chaparral. Associated tree species include foothill pine, knobcone pine, tanoak, Pacific madrone, and California laurel. At middle elevations, MHW merges with montane hardwood-conifer or Douglas-fir. Associated tree species at middle and higher elevation include canyon live oak, Douglas-fir, California black oak, and mixed conifer. Steep, rocky south slopes of major river canyons often support MHW, typically dominated by canyon live oak and scattered Douglas-fir. MHW occurs on soils that are rocky, alluvial, coarse-textured, poorly developed, and well-drained.

The CWHR description for MHW can be found here.

1.1.1.4 Montane Hardwood-Conifer (MHC)

Montane hardwood-conifer has a relative overstory cover by hardwoods of at least 50% and a relative overstory cover by conifers of at least 25%. MHC is transitional between dense coniferous forests present at upper elevations and montane hardwood, mixed chaparral, or open woodlands and savannahs. MHC often occurs as a closed forest. MHC typically supports

relatively little understory except in ecotones or following a disturbance such as fire or logging. Common associated tree species include California black oak, bigleaf maple, white alder, dogwood, Douglas-fir, incense-cedar, and ponderosa pine. MHC includes vegetation associated with both coniferous and hardwood habitats. Habitat composition is generally defined as including a minimum of one-third coniferous trees and one-third broad-leaved trees. Typically, conifers dominate the upper canopy, and broad-leaved trees form a sub-canopy.

The CWHR description for MHC can be found here.

1.1.1.5 Valley Oak Woodland (VOW)

Valley oak woodland is best developed on deep, well-drained alluvial soils and is usually found below 2,000 feet. VOW varies from savannah-like stands to forest-like stands with partially closed canopies. Denser stands typically grow in valley soils along natural drainages. Canopies in VOW are dominated almost exclusively by valley oak. In the foothills, VOW intergrades with blue oak or blue oak-foothill pine woodlands. Near major stream courses, VOW may intergrade with valley-foothill riparian woodlands and can be associated with Fremont cottonwood and willow trees. The shrub understory typically includes poison oak, blue elderberry, California wild grape, toyon, coffeeberry, and California blackberry.

VOW provides food, cover, reproductive sites and corridors for numerous wildlife species. Wildlife commonly found in VOW includes gopher snake, acorn woodpecker, oak titmouse, white-breasted nuthatch, California quail, and western gray squirrel. Valley oak woodland is classified as a sensitive habitat by both the CNDDB and CWHR, and is listed as a high-priority community for inventory by the CNDDB. The 2004 General Plan also identifies valley oak woodland as a sensitive habitat (El Dorado County 2003).

The CWHR description for VOW can be found here.

1.1.2 Current Distribution of Oak Woodland Types

Table 1-1 displays the acreage of each oak woodland type within the ORMP area. The majority of blue oak woodland, blue oak-foothill pine, and valley oak woodland within El Dorado County occurs below 2,000 feet (Figure A-1). Valley oak woodland tends to be found on well-developed soils (Pavlik et al. 1991). Blue oak savannah (canopy cover less than 10%) with few or no shrubs occurs in the low foothills often on low hillocks and exposed, south-facing slopes and transitions into blue oak woodland at higher elevations or north-facing slopes. Blue oak woodland supports a more complex community (Pavlik et al. 1991). Montane hardwood is spread throughout the ORMP area, extending from the annual grasslands in the west to the forested types in the east. Montane hardwood-conifer is most prevalent east of Highway 49.

1.1.3 Historic Distribution

Vegetation type maps for California were created during the 1920s and 1930s by Albert Wieslander and others. The maps, now known as the Wieslander Vegetation Type Mapping (VTM) collection, were digitized in a geographic information systems (GIS) database providing a valuable tool for comparative analysis of vegetation type change over time (Kelly et al. 2005).

Based on a comparison between the VTM data from the 1920s and 1930s and the 2015 FRAP data, the distribution of oak woodlands in El Dorado County has changed significantly in approximately 85 years. The spatial extent of oak woodlands in the County has remained generally the same at elevations below approximately 1,500 feet. However the areas above 1,500 feet have seen significant expansion of oak woodland cover, notably in the region south of Placerville and the areas surrounding the communities of Greenwood and Georgetown. These areas were mapped by Wieslander as being dominated by ponderosa pine, and were classified by Kelly et al. (2005; 2008) as the ponderosa pine CWHR type (PPN). Many of these areas, however, are noted as having California black oak as a notable species present. Other areas classified by FRAP (CAL FIRE 2015) as oak woodland were classified by Wieslander as cropland, chaparral, or annual grassland.

In more recent years, oak woodland has been lost or greatly degraded due to urban development, primarily in community centers such as those that occur along the Highway 50 corridor. In areas dedicated to grazing, oak woodland understory is predominantly annual grassland. At the lower elevations of timberland, small areas of oak woodland were converted to conifer plantations. Statewide the primary cause of woodland conversion between 1945 and the early 1970s was rangeland improvement; since the early 1970s, the primary cause has been urban and suburban expansion (Bolsinger 1988). Valley oaks have been lost over the last 150 years to agricultural and residential development in prime lowland real estate (Pavlik et al. 1991).

1.1.4 Existing Threats

A literature review reveals differing opinions regarding the threats to oak woodlands. The main processes threatening oak woodlands statewide are land clearing for subdivisions, intensive agriculture, and the continued parcelization of large continuous woodland ownerships to exurban development (Giusti et al. 2004). The Wildlife Conservation Board considers threats to oak woodlands in the Sierra Nevada foothills to include development, fragmentation, agricultural development, livestock grazing, low regeneration, and wood cutting. Additional threats identified for the Sierra Nevada above the foothills include high fire risk and water control. A study of oak woodlands in the Sierra Nevada foothills by Frost and Churches (2003) considered threats to oak woodlands to include development, wildfire, harvest, mortality, and thinning.

Impacts vary from complete removal of oak woodland to degradation of the quality of remaining oak woodland due to fragmentation. Fragmentation refers to the breaking up of contiguous land into smaller pieces that are separated by varying distances. Fragmentation results in the degradation of habitat and ecosystem values.

Saving and Greenwood (2002) modeled projected development of El Dorado County under the proposed 1996 General Plan. They concluded that four percent of oak woodland land cover would be physically lost to development but 40 percent of "rural" oak woodland would be converted to marginal or urban habitat. According to Saving and Greenwood (2002), "...areas that once functioned under a more natural state and presumably provided functional habitat for species are degraded, either due to proximity to urban land uses or by isolation from larger patches of contiguous natural vegetation." They determined that rural residential development impacts habitat quality through fragmentation more than it impacts the extent (i.e., area) of

habitat. Clearing for fire protection that occurs with development also leads to the degradation of oak woodlands (Harris and Kocher 2002). The thinning of trees and removal of understory shrubs and trees results in a loss of species and of structural diversity.

1.1.5 Natural Regeneration

Regeneration is the net effect of individuals added to a population through recruitment and individuals lost through mortality. Successful recruitment depends on several factors: acorn crop, conditions for germination, survival of seedlings, and survival of saplings to mature stages.

Bolsinger (1988) reported on regeneration in oak woodlands as indicated by seedlings and saplings in sample plots across California. Seedlings and saplings were in great abundance in canyon live oak stands and in moderate amounts in interior live oak, California black oak, and Oregon white oak stands. Regeneration was sparse in blue oak stands and almost nonexistent in valley oak stands (although valley oak regeneration was found in stands dominated by other species). The shortage of saplings for oak species (especially blue oak and valley oak), in the long-term, could lead to the gradual loss of oak stands as mature oaks are lost to natural mortality (Standiford and McCreary 1996).

Specific to blue oak, Swiecki et al. (1997) support the concept of advance regeneration. Blue oak seedlings persist for extended periods (up to 15 years) in the understory. Sapling recruitment occurs under appropriate conditions such as an opening in the canopy. In the study by Swiecki et al. (1997), a positive correlation was found between gaps in the canopy and successful sapling recruitment.

Several factors have been implicated in poor oak regeneration (Giusti et al. 2005; Siegel and DeSante 1999; McCreary 2009; Pavlik et al. 1991). These factors include:

- Grazing by livestock (depending on timing and intensity)
- Browsing by deer
- Fire suppression
- Yearly burning
- Conversion of native perennial understory to annual grasses that deplete soil moisture early before oak seedlings can successfully compete for light and nutrients
- Absence of appropriate climatic conditions
- Global warming
- Heavy vehicle use
- Rodent herbivory (rodent populations have increased as their predators have declined)
- Predation by turkey
- Past land management history

The factor or combination of factors affecting successful oak regeneration varies by geographic region and local conditions. Some writings indicate that poor oak regeneration dates back 100 to 150 years. Deciduous oak regeneration was locally abundant prior to 1900 (Standiford et al. 1996). Few areas are known where successful recruitment of blue oaks has occurred since the late 1800s (Holland 1976). Most oak stands contain numerous individual trees that range in age between 100 and 200 years, but typically contain few very old trees (Bartolome et al. 1987).

As noted in McCreary (2009), three California oak species are reported to have regeneration problems: blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*), and Engelmann oak (*Quercus engelmannii*). Blue and valley oaks are present in El Dorado County and, generally the regeneration problem is the lack of shortage of saplings and intermediate-sized trees. Identified causes of poor regeneration for these species include the introduction of Mediterranean annuals, livestock grazing, increased rodent populations, changing fire frequencies, and changing climate (McCreary 2009).

1.2 Individual Tree Species

1.2.1 Oak Species

The oak woodland types in El Dorado County include six main native oak tree species: blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*), California black oak (*Quercus kelloggii*), interior live oak (*Quercus wislizeni*), canyon live oak (*Quercus chrysolepis*), and Oregon oak (*Quercus garryana*). Additionally, one native hybrid between California black oak and interior live oak exists, known as oracle oak (*Quercus x morehus*). Table 1-2 lists native oak tree species that occur within the ORMP area. Tanbark oak (*Notholithocarpus densiflorus*), which occurs in the Georgetown area, produces acorns but is not considered a "true" oak (Pavlik et al. 1991; Oak Woodlands Conservation Act of 2001).

Table 1-2
Native Oak Tree Species within the ORMP Area

Species	Common Name
Quercus chrysolepis	Canyon live oak
Quercus douglasii	Blue oak
Quercus garryana	Oregon white oak
Quercus kelloggii	California black oak
Quercus lobata	Valley oak
Quercus wislizeni	Interior live oak
Quercus x morehus	Oracle oak (hybrid of California black and interior live oaks)

Shrub species of oak that occur in the ORMP area include: scrub oak (*Quercus berberidifolia*), leather oak (*Quercus durata*), Nuttall's scrub oak (*Quercus dumosa*), and Brewer oak (*Quercus*

garryana var. *breweri*) (Calflora 2015). Huckleberry oak (*Quercus vaccinifolia*) is widespread in El Dorado County above the ORMP area with limited distribution below 4000 feet. The following sections present tree species information summarized from Stuart and Sawyer (2001), Pavlik et al. (1991), Bolsinger (1988), Tucker (1980), and Gaman and Firman (2006).

1.2.1.1 Canyon Live Oak

Canyon live oak (*Quercus chrysolepis*) is an evergreen tree that ranges from 15 to 70 feet in height. Canyon live oak is shade and drought tolerant. It is found throughout much of California, except the Central Valley, Great Basin, and Sonoran Desert. Canyon live oak grows on a variety of sites and with a variety of forms. Single-stemmed trees grow on better sites such as in moist forest canyons. Multi-stemmed trees grow on canyon walls, cliffs, and rocky sites while shrubby forms grow on the harshest sites. Repeated fires may convert canyon live oak trees to shrub form. Wildlife use canyon live oak for roosting, nesting, foraging, and cover. Birds and mammals eat the acorns.

1.2.1.2 Blue Oak

Blue oak (*Quercus douglasii*) typically grows as a single-stemmed tree with mature heights ranging from 20 to 60 feet. This deciduous tree can live up to 400 years. The leaf surfaces are bluish green. Blue oak is drought tolerant and shade intolerant. Blue oak occurs naturally only in California. It grows in woodlands and valleys of California's foothills, especially bordering the Central Valley. Blue oak has several adaptations for growing on shallow soils in a hot, dry climate. Roots emerge from the acorns during the fall rains and grow rapidly. Leaves have a waxy, moisture-conserving coating. Blue oak drops its leaves in extremely hot and dry years. It is often associated with foothill pine (*Pinus sabiniana*), California buckeye (*Aesculus californica*), interior live oak, Oregon white oak, and valley oak. Blue oak provides critical winter range for deer and other wildlife. Its foliage is used for browse and many species consume its acorns.

1.2.1.3 Oregon White Oak

Oregon white oak (*Quercus garryana*) typically grows as a single-stemmed tree with mature heights ranging from 25 to 90 feet. This deciduous tree is moderately shade tolerant but can be out-competed by conifers. It sprouts after being injured by fire or cutting. Oregon white oak grows in the central and north Coast Range and in the foothills of the Sierra Nevada and Cascade Ranges. It is an uncommon species in El Dorado County; however, Stuart and Sawyer (2001) report that the largest Oregon white oak in California (over 120 feet in height and eight feet in diameter) grows in El Dorado County. Wildlife and livestock browse its foliage and many species of birds and mammals eat its acorns. Oregon white oak is also listed as a Group B commercial species in the Northern Forest District, as identified in the 2014 California Forest Practice Rules (Title 14, California Code of Regulations, Chapter 4).

1.2.1.4 California Black Oak

California black oak (*Quercus kelloggii*) typically grows as a single-stemmed tree with mature heights ranging from 30 to 80 feet. On infertile sites, its growth form can be shrubby. California

black oak is initially shade tolerant but becomes shade intolerant as it grows. It sprouts after being injured by fire or cutting. California black oak is widely distributed within woodlands and coniferous forests. Stands dominated by California black oak occur infrequently within lower montane elevations. Many wildlife species use California black oak for forage and cover and eat its acorns. It is the primary commercial hardwood species in California and is listed as a Group B commercial species in the Northern Forest District, as identified in the 2014 California Forest Practice Rules (Title 14, California Code of Regulations, Chapter 4).

1.2.1.5 Valley Oak

Valley oak (*Quercus lobata*) is typically a single-stemmed, deciduous tree that can reach heights of 30 to 90 feet. It is the largest oak species in California and can live to be 400 to 600 years old. This deciduous tree is intermediate in its shade tolerance and sprouts after being injured by fire or cutting. Valley oak occurs only in California and is found in valley and foothill woodlands in the Central Valley, Sierra Nevada foothills, and the Coast Ranges. Usually found on deep, alluvial soils, it can grow on shallow or stony soils if its roots can reach sufficient moisture. Its vertical root system taps into groundwater with some roots as deep as 80 feet. Although most common below 2,000 feet, it can range above 5,000 feet. Valley oak provides important habitat for wildlife.

1.2.1.6 Interior Live Oak

Interior live oak (*Quercus wislizeni*) is a broad, densely-branched, evergreen tree that can reach heights of 30 to 75 feet. It is shade tolerant and drought sensitive. Its thick bark is resistant to fire. Trees sprout after fire. In areas with recurring fire, it can form shrubby thickets. Interior live oak grows across the western half of California, including the Sierra Nevada foothills, usually where summers are hot and dry and winters are cool and wet. In the Sierra Nevada, clumps of interior live oak may be concentrated around rock outcrops within blue oak woodlands. With increasing elevation, particularly on north slopes, interior live oak becomes more prevalent and may nearly replace blue oak as the dominant species in a stand. Interior live oak provides important wildlife forage and habitat, although live oak leaves are less palatable to deer than are leaves of deciduous species such as blue oak.

1.2.1.7 Oracle Oak

Oracle oak (*Quercus x morehus*) is a hybrid of California black oak and interior live oak that is found throughout the Sierra Nevada, the Coast Ranges south of Mendocino County, and the Peninsular and Traverse ranges. Its form it typically a small, upright tree and it can reach heights between 25 and 40 feet, although it can be quite variable due to its nature as a hybrid. Oracle oak is the most widely distributed hybrid oak species in California, having been first described in 1863. Tree form and foliage shape and size are blend of its parent species.

1.2.2 Non-Oak Species

Oak woodlands are comprised of a variety of tree species, including non-oak species. Predominant non-oak tree species found within El Dorado County oak woodlands include foothill pine (*Pinus sabiniana*), knobcone pine (*P. attenuata*), California buckeye (*Aesculus*

californica), ponderosa pine (*P. ponderosa*), Douglas-fir (*Pseudotsuga menziesii*), bigleaf maple (*Acer macrophyllum*), Pacific madrone (*Arbutus menziesii*), and Pacific dogwood (*Cornus nuttallii*). The shrub component can be sparse to dense depending on site conditions and management.

2.0 Natural Resource Values of Oak Resources

The purpose of this section is to introduce the reader to the ecosystem values of oak woodlands. Economic and social values are described in Section 3. Mapping of oak woodlands and priority conservation areas is presented in Section 4.

2.1 Wildlife

Oak woodlands provide many natural resource values. Oak woodlands provide habitat for native wildlife, plants, and insects, some of which are classified as special-status species. Oak woodlands contribute to nutrient cycling, soil quality and erosion control, water quality, and watershed health. Humans benefit from these ecosystem functions of oak woodlands and from the aesthetic and open space values of oak woodlands, which provide many recreational opportunities in El Dorado County. Conversion and fragmentation of oak woodlands result in direct loss of oak woodland or an indirect loss through degradation of remaining oak woodlands.

Oak woodlands provide many values to wildlife including food, cover, and breeding sites. Acorns are an important food source for mule deer, western gray squirrels, acorn woodpeckers, band-tailed pigeons, scrub jays, and many other vertebrate species as well as invertebrate species (Giusti et al. 1996; USDA Forest Service 2001; Tietje et al. 2005). Mule deer migrations are influenced by acorn production (Garrison 1992). Acorn woodpeckers are dependent not only on acorns as a food source but also on trees where they can store acorns in holes (i.e., granaries). Other animals depend on leaves and roots. Oak trees also are sources of fungi, mistletoe, and insects for rodent and bird species. Oak woodlands also provide food in the form of herbaceous plants in the understory.

Cavity trees provide shelter and breeding sites for birds. Deciduous oaks, such as blue oak, California black oak, and valley oak, are particularly important as cavity trees (Tietje et al. 2005). Evergreen trees are important for secondary cavity nesters. Snags (i.e., standing dead trees) provide perching and basking sites as well as roosts. Downed woody material, from limbs to logs, provides resting and reproductive cover for reptiles, amphibians, and birds. Oak woodlands with more complex understories (e.g., seedlings/saplings, understory trees, shrubs, herbaceous vegetation, downed woody material) provide habitat for a greater variety of species, including ground-nesting birds. A diverse structure provides reproductive sites for diverse wildlife communities.

Oaks and other trees also influence stream conditions, such as water temperature and flow rates, which in turn influence the presence and health of fish populations (Tietje et al. 2005). Oaks provide structure through deposition of coarse woody debris in streams and help reduce sedimentation. Some streams that flow through oak woodlands in the Sierra Nevada foothills are identified as special habitat in the CNDDB (see Table 2-1).

El Dorado County supports resident and migratory populations of mule deer (El Dorado County 2003). The preservation of deer migration corridors has been a concern of the California Department of Fish and Wildlife (CDFW) as urbanized areas expand in the foothills. As a result, CDFW has mapped critical habitat and deer migration patterns for three deer herds (El Dorado

County 2003). Critical winter range occurs primarily below 4,000 feet and critical summer range, holding areas, and fawning areas occur primarily above 4,000 feet (i.e., outside the ORMP area). Connectivity between the critical winter range and other areas is essential for the long-term health of deer populations.

Connectivity touches on larger values of oak woodlands. In addition to needing sufficient space to provide for food, shelter, and social structures, wildlife need connectivity of habitats. Oak woodlands are one type of habitat that can be utilized as corridors by wildlife. Corridors are essential for dispersal of young animals, migration routes, and gene flow. Corridors allow dispersers (including plants, fungi, insects, and other organisms) from one area to recolonize another area that may have experienced local extirpations (e.g., from a catastrophic wildfire). All organisms within a community cannot use the same corridors equally. Species with limited mobility will not be able to utilize long corridors. For species sensitive to edge effects, corridors must be wide enough to retain core habitat. Relative intact native vegetation is an important component of corridors (Hilty et al. 2006).

Oak woodlands function most effectively and provide the greatest habitat value in large contiguous expanses. Both size and configuration are important. Larger areas of oak woodland (especially with greater connectivity) tend to support more species. The rate of local extinction increases with smaller patch size; however, species also are lost from larger (250 acres) fragments (Hilty et al. 2006). The species composition within California oak woodland changes from large to small areas and with decreasing distance from urban settings. Merenlender and Heise (1999) reported that the percent of neotropical birds was significantly higher in undeveloped oak woodlands of 500 acres or more in California than in ranchettes (10-40 acres) and suburban lots (0.5-2.5 acres).

2.2 Special-Status Species

A query of the CNDDB (CDFW 2016) and CNPS (CNPS 2016) identified 66 special-status species and three unique natural communities in the ORMP area (Table 2-1 and 2-2). Five of the 35 vertebrate species in Table 2-2 are associated with oak woodland habitats (Garrison, 1996). Eleven of the 29 plant species in Table 2-1 occur in oak woodland habitats (Shaffer, 1996; CNPS, 2016).

Table 2-1. Special-Status Plants Occurring or Potentially Occurring in the ORMP Area

Species	Habitat	CNPS	CDFW	USFWS
Jepson's Onion *Allium jepsonii*	Chaparral, cismontane woodland, lower montane coniferous forest; elevation 900-4,300 feet	1B	--	--
Nissenan manzanita *Arctostaphylos nissenana*	Closed-cone coniferous forest, chaparral/rocky; elevation 1,500-3,600 feet	1B	--	--
big-scale balsamroot *Balsamorhiza macrolepis* var. *macrolepis*	Chaparral, cismontane woodland, valley and foothill grassland/sometimes serpentinite; elevation 300-4,600 feet	1B	--	--
watershield *Brasenia schreberi*	Marshes and swamps, freshwater; elevation 100-7,200 feet	2	--	--
Pleasant Valley Mariposa lily *Calochortus clavatus* var. *avius*	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/usually serpentinite, clay, rocky; elevation 200-4,300 feet	1B	--	--
Stebbins' morning-glory *Calystegia stebbinsii*	Chaparral (openings), cismontane woodland/serpentinite or gabbroic; elevation 600-2,400 feet	1B	CE	FE
Van Zuuk's morning glory *Calystegia vanzuukiae*	Gabbro, serpentinite, chaparral, cismontane woodland; elevation 1600-3,900 feet	1B	--	--
Shore sedge *Carex limosa*	Bogs and fens, lower montane coniferous forest, meadows and seeps, marshes and swamps, upper montane coniferous forest; elevation 3,900-8,900 feet	2	--	--
Pine Hill ceanothus *Ceanothus roderickii*	Chaparral, cismontane woodland/serpentinite or gabbroic; elevation 900-2,100 feet	1B	CR	FE
Red Hills soaproot *Chlorogalum grandiflorum*	Chaparral, cismontane woodland, lower montane coniferous forest/serpentinite or gabbroic; elevation 800-3,300 feet	1B	--	--
Oregon fireweed *Epilobium oreganum*	Bogs and fens, lower montane coniferous forest, upper montane coniferous forest/mesic; elevation 1,600-7,300 feet	1B	--	--
Pine Hill flannelbush *Fremontodendron decumbens*	Chaparral, cismontane woodland/gabbroic or serpentinite, rocky; elevation 1,400-2,500 feet	1B	CR	FE
El Dorado bedstraw *Galium californicum* spp. *sierrae*	Chaparral, cismontane woodland, lower montane coniferous forest/gabbroic; elevation 300-1,900 feet	1B	CR	FE
American manna grass *Glyceria grandis*	Bogs and fens, meadows and seeps, marshes and swamps (streambanks and lake margins); elevation 50-6,500 feet	2	--	--
Parry's horkelia *Horkelia parryi*	Chaparral, cismontane woodland/especially Ione formation; elevation 300-3,000 feet	1B	--	--
Saw-toothed lewisia *Lewisia serrata*	Broadleaved upland forest, lower montane coniferous forest, riparian scrub; elevation 3,000-	1B	--	--

Species	Habitat	CNPS	CDFW	USFWS
	4,700 feet			
broad-nerved hump moss *Meesia uliginosa*	Bogs and fens, meadows and seeps, subalpine coniferous forest, upper montane coniferous forest; elevation 3,900-9,200 feet	2	--	--
Northern adders-tongue *Ophioglossum pusillum*	Marshes and swamps (margins), valley and foothill grassland (mesic); elevation 3,300-6,600 feet	2	--	--
Layne's ragwort *Packera layneae*	Chaparral, cismontane woodland/serpentinite or gabbroic, rocky; elevation 650-3,500 feet	1B	CR	FT
Stebbins' phacelia *Phacelia stebbinsii*	Cismontane woodland, lower montane coniferous forest, meadows and seeps; elevation 2,000-6,600 feet	1B	--	--
Sierra blue grass *Poa sierrae*	Lower montane coniferous forest, openings; elevation 1,200-4,900 feet	1B	--	--
Nuttall's pondweed *Potamogeton epihydrus*	Marshes and swamps (assorted shallow freshwater); elevation 1,300-6,200 feet	2	--	--
brownish beaked-rush *Rhynchospora capitellata*	Lower montane coniferous forest, meadows and seeps, marshes and swamps, upper montane coniferous forest; elevation 150-6,600 feet	2	--	--
Sanford's arrowhead *Sagittaria sanfordii*	Marshes and swamps (assorted shallow freshwater); elevation 0-2,100 feet	1B	--	--
water bulrush *Schoenoplectus subterminalis*	Bogs and fens, marshes and swamps (montane lake margins); elevation 2,400-7,400 feet	2	--	--
marsh skullcap *Scutellaria galericulata*	Lower montane coniferous forest, meadows and seeps (mesic), marshes and swamps; elevation 0-6,900 feet	2	--	--
slender-leaved pondweed *Stuckenia filiformis ssp. alpina*	Marshes and swamps (assorted shallow freshwater); elevation 990-7,100 feet	2	--	--
oval-leaved viburnum *Viburnum ellipticum*	Chaparral, cismontane woodland, lower montane coniferous forest; elevation 700-4,600 feet	2	--	--
El Dorado mule-ears *Wyethia reticulata*	Chaparral, cismontane woodland, lower montane coniferous forest/clay or gabbroic; elevation 600-2,100 feet	1B	--	--

Status:
Federal
FE Federally listed as "Endangered"
FT Federally listed as "Threatened"
State
CE State listed as "Endangered"
CT State listed as "Threatened"
CR State "Rare"
Other
CNPS: Rare Plant Rank
1B.1 Plants rare, threatened, or endangered in California and elsewhere; seriously threatened in California
1B.2 Plants rare, threatened, or endangered in California and elsewhere, fairly threatened in California
2 Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

Sources: CDFW 2015, CNPS 2016

Table 2-2. Special-Status Wildlife Potentially Occurring in the ORMP Area

Species	Habitat	CDFW	USFWS
INVERTEBRATES			
vernal pool fairy shrimp *Branchinecta lynchi*	Endemic to vernal pools and swales associated with valley and foothill grasslands. Elevation range 30 to 5,600 feet.	--	FT
valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	Elderberry shrubs, usually in streamside habitats, but also found in isolated elderberry bushes. Elevation range from sea level to 3,000 feet.	--	FT
FISH			
hardhead *Mylopharodon conocephalus*	Undisturbed areas of larger middle- and low-elevation streams. Elevation range from 30-4,800 feet	CSC	--
Lahontan cutthroat trout *Oncorhynchus clarkii henshawi*	Coldwater lakes and streams. Elevation range from sea level to 10,000 feet.	--	FT
steelhead- central valley DPS *Oncorhynchus mykiss irideus*	Found in cool, clear, fast-flowing permanent streams and rivers with ample cover from riparian vegetation or undercut banks. Elevation range from sea level to 10,000 feet.	--	FT
steelhead- Klamath Mountains Province DPS *Oncorhynchus mykiss irideus*	Found in cool, clear, fast-flowing permanent streams and rivers with ample cover from riparian vegetation or undercut banks. Elevation range from sea level to 10,000 feet.	CSC	--
AMPHIBIANS AND REPTILES			
California tiger salamander *Ambystoma californiense*	Vernal pools and seasonal ponds in valley and foothill grasslands. Elevations range from sea level to 3,200 feet.	CT/CSC	FT
northwestern pond turtle *Emys marmorata marmorata*	Streams and ponds with suitable upland habitat for nesting. Elevation range from sea level to 4,700 feet.	CSC	--
northern leopard frog *Lithobates pipiens*	Generally prefers permanent water with abundant aquatic vegetation. One known population near Lake Tahoe. Elevation range from sea level to 7,000 feet.	CSC	--
foothill yellow-legged frog *Rana boylii*	Partly shaded, shallow streams with a rocky substrate. Elevation range from near sea level to 6,370 feet.	CSC	--
California red-legged frog *Rana draytonii*	Breeding habitat includes marshes, springs, permanent and semi-permanent natural ponds, and ponded and backwater portions of streams. Adult frogs prefer dense, shrubby or emergent riparian vegetation near deep, still or slow moving water. Elevation range from sea level to 5,000 feet.	CSC	FT
Sierra Nevada yellow-legged frog *Rana sierrae*	Lakes, ponds, meadow streams, isolated pools, and sunny riverbanks in the Sierra Nevada Mountains. Elevation range from 1,000 feet to	CT/CSC	FE

Species	Habitat	CDFW	USFWS
	12,000 feet.		
	BIRDS		
Northern goshawk *Accipiter gentilis*	Prefers middle and higher elevations and mature, dense conifer forest. Elevation range from 1,000 to 10,800 feet.	CSC	--
tricolored blackbird *Agelaius tricolor*	Colonial species that requires emergent marsh, blackberry bushes, or other dense cover near open water for nesting. Elevation range from sea level to 3,300 feet.	CE	--
golden eagle *Aquila chrysaetos*	Nests on cliff edges or in large trees near grasslands and open forests and woodlands. Elevation range from sea level to 10,000 feet.	CFP	--
burrowing owl *Athene cunicularia*	Grasslands and agricultural fields at lower elevations, but can occur sporadically at higher elevations. Elevation range from sea level to 12,000 feet.	CSC	--
Vaux's swift *Chaetura vauxi*	Prefers redwood and Douglas-fir habitat with nest sites in large hollow trees and snags. Elevation range from 1,500 to 4,500 feet.	CSC	--
northern harrier *Circus cyaneus*	Grasslands, agricultural fields, marshes and other open habitats in valleys and foothills. Elevation range from sea level to 10,000 feet.	CSC	--
olive-sided flycatcher *Contopus cooperi*	Found in a variety of forest and woodland habitats. Elevation range from sea level to 10,500 feet.	CSC	--
black swift *Cypseloides niger*	Nests in moist crevices and cliffs behind or adjacent to waterfalls in deep canyons. Elevation range 3,000 feet to 10,000 feet.	CSC	--
yellow warbler *Dendroica petechial brewsteri*	Breeds in riparian habitats, montane chaparral and coniferous forests with dense shrub layers. Elevation range from sea level to 9,000 feet.	CSC	--
white-tailed kite *Elanus leucurus*	Open grasslands, woodlands and savannas; generally avoids areas with extensive winter freezes. Elevation range from sea level to 5,000 feet.	CFP	
willow flycatcher *Empidonax traillii*	Thickets of low, dense willows. Elevation range from sea level to 8,000 feet.	CE	--
bald eagle *Haliaeetus leucocephalus*	Uses conifer snags and other large trees near large water bodies for nesting. Elevation range from sea level to 6,500 feet.	CE/CFP	--
yellow-breasted chat *Icteria virens*	Breeds in riparian scrub and riparian woodland. Elevation range from sea level to 5,000 feet.	CSC	--
loggerhead shrike *Lanius ludovicianus*	Open habitats with scattered shrubs and trees. Elevation range from sea level to 7,500 feet.	CSC	--
bank swallow *Riparia riparia*	Colonial nester that requires vertical earthen banks or cliffs near rivers or lakes. Elevation range from sea level to 7,000 feet.	CT	--

Species	Habitat	CDFW	USFWS
great gray owl *Strix nebulosa*	Forest habitat adjacent to meadows or bogs. Elevation range from 3,000 to 8,000 feet,	CE	--
California spotted owl *Strix occidentalis occidentalis*	Nests in dense, multilayered evergreen forest. Elevation range from 1,000 to 8,500 feet.	CSC	--
yellow-headed blackbird *Xanthocephalus xanthocephalus*	Occur as migrants in grasslands, croplands, or savanna. Elevation range from sea level to 8,000 feet.	CSC	--
MAMMALS			
pallid bat *Antrozous pallidus*	A wide variety of habitats at lower elevations, including grasslands, shrublands, woodlands and forests. Elevation range from sea level to 8,000 feet.	CSC	--
Sierra Nevada mountain beaver *Aplodontia rufa californica*	Rivers, lakes, ponds and streams with nearby dense understory of small deciduous trees and shrubs	CSC	--
Townsend's big-eared bat *Corynorhinus townsendii*	All but subalpine and alpine habitats, and may be found at any season throughout its range. Elevation range from sea level to 9,500 feet.	CCT/CSC	--
California wolverine *Gulo gulo*	A variety of high elevation habitats including subalpine and montane forest. Elevation range from 1,600-10,800 feet.	CT/CFP	--
southwestern river otter *Lontra canadensis sonora*	Rivers and large streams. Elevation range from sea level to 10,000 feet.	CSC	--
fisher- west coast DPS *Pekania pennanti*	Coniferous or deciduous-riparian forest with high percentage canopy cover. Elevation range from sea level to 8,500 feet.	CCT/CSC	FCT
American badger *Taxidea taxus*	Drier open stages of most shrub, forest, and herbaceous habitats with friable soils. Elevation range from sea level to 12,000 feet.	CSC	--

Status:
Federal
FE Federally listed as "Endangered"
FT Federally listed as "Threatened"
FCT Candidate for federal listing as "Threatened)
State
CE State listed as "Endangered"
CT State listed as "Threatened"
CCT Candidate for State listing as "Threatened"
CFP State designated "Fully Protected" or "Protected"
CSC State designated "Species of Special Concern"

Source: CDFW 2015

2.3 Recreation and Open Space

A major incentive for people to move into the Sierra Nevada foothills is the open space. As the population has grown, so has the desire to maintain areas of open space for recreational purposes or aesthetic values. El Dorado County supports an expanding network of trails for hikers, bicyclists, and equestrians. These lands designated for recreation (e.g., Cronan Ranch Regional Trails Park) help to maintain large expanses of oak woodland. The benefits of supporting oak woodland habitat and providing wildlife habitat are enhanced when recreational areas connect with other open space, such as under agricultural and natural resources land use designations.

A partial list of areas in the ORMP area that provide recreational and/or open space values are described below. This list is not exhaustive, but helps to identify potential opportunities to maintain large expanses of oak woodland and to provide connectivity among the woodlands.

- The Cronan Ranch Regional Trails Park, east of Coloma, is managed by the Bureau of Land Management and includes a 62-acre parcel owned by El Dorado County. Plans exist to connect this area with the South Fork American River corridor trail that will run from Greenwood Creek to Salmon Falls. This park contains oak woodlands.
- The Folsom Lake State Recreation Area provides trails, camping, and open space around Folsom Lake.
- The Auburn State Recreation Area provides trails through oak woodland habitats near the confluence of the north and middle forks of the American River and in the community of Cool. Corridors are maintained along the north and middle forks of the American River.
- Marshall Gold Discovery State Historic Park in Coloma has the Monroe Ridge and Monument trails and other open space in oak woodland habitats near the South Fork of the American River.
- The Sacramento-Placerville Transportation Corridor (SPTC), as discussed in Section 11, includes 28 miles of the corridor within El Dorado County, much of which passes through oak woodland.
- The El Dorado Trail is jointly owned by the City of Placerville and El Dorado County. It winds through oak woodland habitats from Placerville to Camino. The El Dorado Trail eventually will connect the SPTC and the National Pony Express Trail Route. Potential may exist to expand the sections through oak woodlands to enhance oak woodland conservation and to meet the need for trails
- Lands along Weber Creek that are part of the El Dorado Irrigation District's (District) Texas Hill properties contain large expanses of oaks. Potential partnering between the District and the County could meet water storage needs and oak conservation goals.
- The Dave Moore Nature Area provides a small recreation area with oak woodland habitat along the South Fork of the American River.
- The Red Shack Trail passes through a 131-acre property supporting oak woodland habitat to reach the South Fork of the American River.

- The Bureau of Land Management (BLM) manages over 3,100 acres in the Pine Hill Preserve network that serves to protect rare plants that occur on gabbroic soils (http://www.pinehillpreserve.org/index.htm). The Pine Hill Preserve consists of five separate units in northern gabbroic mixed chaparral and oak woodland.
- The American River Conservancy has protected 3,910 acres of critical riparian habitat throughout the Upper Cosumnes River Basin. Protection of the river basin is guided by the Upper Cosumnes River Basin Strategic Plan, which serves as a blueprint for acquisitions and easements that will eventually protect thousands of acres of sensitive riverfront lands, and connect them with existing public lands throughout the watershed. (American River Conservancy 2016).
- Peavine Point Research Natural Area on the Eldorado National Forest encompasses 1,098 acres about two miles northeast of Pollock Pines at an elevation range of 2,080 to 3,854 feet (USDA Forest Service undated). Although the primary target element for designating this site as a research natural area is old-growth ponderosa pine, the secondary target element is black oak, which dominates the middle canopy.

Maintaining and expanding open space is not a panacea for encroaching development and the effects from loss of oak woodland habitat and fragmentation. Human activities within open space affect biological values. The introduction of non-native species, wildlife harassment by pets, and trampling of vegetation are examples of factors that impair biodiversity values (Hilty et al. 2006). Open space that provides for human activities should be used as one component of a comprehensive approach to preserving oak woodland habitats in the County.

2.4 Health and Function of Local Watersheds

Oak woodlands contribute to the health of watersheds in several ways. Organic debris from oaks is important for soil building and maintenance of water quality (USDA Forest Service 2001). Oak woodlands contribute organic matter to the soil and thereby provide soil cover and nutrients to enhance soil fertility, as well as reducing bulk density. Soil structure, increased infiltration rates, and reduction of soil erosion and sedimentation are functions present in oak woodlands, which can contribute to better water quality.

In a study of blue oak stands, soil quality and fertility were enhanced beneath oak canopies as compared to adjacent grassland (Dahlgren et al. 2003). Oak woodlands remove more water from the soil profile than do grasslands and this water is released through evapotranspiration. Because the loss of water through evapotranspiration reduces the leaching intensity beneath oak woodland canopy, more nutrients are retained within the soil and fewer nutrients are leached into streams and creeks.

A Watershed Assessment was completed for the South Fork of the American River (Georgetown Divide Resource Conservation District 2004). A water quality risk was assigned to each sub-basin in the watershed. Eleven sub-basins in the ORMP area received the two highest ratings for risk; sub-basins outside the ORMP area had lower risk. High risk was associated with high density of roads, structures, and impervious cover in the lower reaches of the watershed, which is

in the ORMP area and where most urban development has occurred. This risk assessment highlights the importance of maintaining the functions of oak woodlands to protect watersheds.

2.5 Soil and Water Retention

Leaves and other organic matter on the ground in oak woodlands absorb water from precipitation and reduce evaporation from the soil (USDA Forest Service, 2001). Organic matter from oak woodlands reduces bulk density and improves soil structure (Dahlgren et al., 2003). The improved soil structure increases infiltration rates and reduces soil erosion and sedimentation. When litter and organic matter are burned in wildfires, infiltration can be reduced and runoff increased (McCreary 2004). Giusti et al. (2004) stated that soil erosion "is often the most glaring impact" from removal of oak woodland vegetation.

2.6 Reduction of Fuel Loads

Fire in oak woodland habitats was used by Native Americans and then by ranchers until the 1950s (Standiford and Adams 1996). In a fire history study near Diamond Springs in El Dorado County, Stephens (1997) determined that the mean fire interval in blue oak woodland from 1850 to 1952 was approximately 8 years. Fires have largely been suppressed since the early part of the 1900s (McCreary 2004).

Oak woodlands are not only adapted to fire, but fire is critical to their ecology (Standiford and Adams 1996). Mature oaks are resistant to low-intensity ground fires; seedlings and saplings may resprout after being top-killed by fire. Germination of some plant species within oak woodland is stimulated by fire. Oak recruitment events in Sierra Nevada have been associated with fire.

Because fires have been suppressed, fuels have accumulated in some oak woodlands. The increase in fuel loading results in an increased risk of high-intensity wildfires. Consequences of high-intensity wildfires include increased run-off and erosion, increased sedimentation into streams, reduction in water quality, loss of wildlife habitat and loss of oak woodlands that had been resilient under an earlier low-intensity fire regime (Standiford and Adams 1996; McCreary 2004).

CAL FIRE administers a Vegetation Management Program (VMP) to assist with fuels management, which includes prescribed burning on private property. The use of prescribed fire is complicated by development in oak woodlands, air quality considerations, increased hazard from greater fuel accumulations, and liability for escaped fires.

2.7 Effects from Loss of Oak Woodlands

Loss of oak woodlands affects many natural resource values. The loss of oak woodlands affects wildlife habitat, plant species diversity, soils, and the function of watersheds. Not only is habitat lost when oak woodlands are removed, but fragmentation of the remaining oak woodlands diminishes the quality of the remaining habitat (Saving and Greenwood 2002; Scott 1996).

2.7.1 Wildlife Habitat

Loss of oak woodlands affects wildlife habitat both directly and indirectly. When oak woodlands are removed, food (e.g., acorns, insects, and fungi), cover, cavities, and nesting sites are removed, reducing the overall amount of available habitat. Downed woody debris and snags that provide shelter are also removed.

Indirect effects from loss of woodlands may be more subtle. Remaining habitat may be small and lack some of the components that wildlife requires. Barriers may be established that prevent wildlife from safely accessing and utilizing all of the habitat components that they need (e.g., water sources or breeding areas). Isolated, small patches may not support the metapopulations or metacommunities necessary for long-term viability.

2.7.2 Fragmentation

Fragmentation is the breaking up of contiguous land into smaller pieces that are separated by varying distances. Degradation of habitat and ecosystem values increases with increasing fragmentation.

Oak woodlands function most effectively and provide the greatest habitat value in large contiguous expanses. Both size and configuration are important. Larger fragments (especially with greater connectivity) tend to support more species. The rate of local extinction increases with smaller patch size; however, species also are lost from larger (250 acres) fragments (Hilty et al. 2006). The species composition within California oak woodlands changes from large to small areas and with decreasing distance from urban settings. Merenlender and Heise (1999) reported that the percent of neotropical birds was significantly higher in undeveloped oak woodlands in California than at ranchettes (10-40 acres) and suburban lots (0.5-2.5 acres).

Natural resource values are maximized when the interior or core area is greater in relation to the edge. Round shapes have greater core to edge area; more irregularly shaped areas or linear areas have greater edge to core area. Edge effects are least significant when the edge transitions to other natural vegetation and is most intense when the edge transitions to a developed landscape. As edge habitat increases, oak woodland is more subject to invasion by exotic species such as invasive weeds and domestic animals.

Giusti et al. (2004) identified two main processes impacting oak woodlands in California: 1) land clearing for subdivisions and intensive agriculture and 2) the parcelization of large continuous woodland ownerships for exurban development. Impacts vary from complete removal of oak woodland to degradation of the quality of retained oak woodland.

Rural residential development, which erodes habitat quality, has been a particular concern in several studies such as Saving and Greenwood (2002) and Merenlender and Heise (1999). The majority of oak woodland habitats in El Dorado County are privately owned rural lands (Saving and Greenwood 2002). Saving and Greenwood (2002) projected fragmentation of oak woodland during full build-out of the 1996 General Plan, predicting that remaining oak woodland would

consist of smaller fragments with greater distance between them. Large contiguous habitat and connectivity would be lost.

High-intensity land uses (up to and including low-density residential) result in fragmentation and loss of the majority of the existing habitat. Medium-intensity land uses (including rural residential) result in removal and fragmentation, but to a lesser extent (El Dorado County 2003). With medium-intensity land uses, some habitats would continue to be viable but the quality of the habitat would be diminished and biological diversity would be reduced. With increasing fragmentation, retained habitats may become too small to support viable populations of species.

When oak woodlands are converted to urban landscapes, some woodlands remain because of oak protection ordinances or because they occur on steep slopes or within drainages (Scott 1996). When oak woodlands are embedded within other land uses, their biological values decline as adjoining habitats are lost. Barriers such as housing alter wildlife movement between stands, resulting in potential population decline.

In El Dorado County, Highway 50 presents a major barrier to north-south wildlife dispersal (El Dorado County 2003; Saving and Greenwood 2002). The connectivity of north and south habitats across Highway 50 was identified as at-risk from future development and was an important value to preserve (Georgetown Divide Resource Conservation District, 2004). The Weber Creek drainage is the only north-south corridor allowing passage of wildlife across the Highway 50. Opportunities to establish additional north-south corridors across Highway 50 may exist at other sites (e.g., drainages from Slate Creek to Indian Creek).

The Saving and Greenwood study identified the need to maintain large contiguous areas of oak woodland that function under a more natural state. The study also emphasized the need for a program that focuses on critical areas of connectivity such as habitat corridors. The General Plan EIR (El Dorado County 2003) discussed the importance of preserving connectivity in the form of riparian corridors, canyon bottoms, and ridgelines and also by maintaining a landscape that contains a network of multiple pathways for wildlife movement.

2.7.3 Retention of Soil and Water

A study in the northern Sierra Nevada foothills examined changes to soil quality following blue oak removal (Camping et al. 2002). Significant reduction in carbon, nitrogen, and other nutrients occurred within 5 to 15 years. Nutrient concentrations in streams increased for 3 to 4 years following vegetation removal (Larsen et al. 2005).

Sediment concentrations also increase in streams following vegetation removal (Larsen et al. 2005). In the Sierra Nevada foothills, conversion of 90 percent of an oak-dominated watershed to grassland led to an almost two-fold increase in sedimentation. Loss of vegetation from development also reduces the retention of soils and water. Increased surface runoff leads to increased water velocity and erosion (Larsen et al. 2005). Rates of sedimentation and non-point source pollution increase with increased run-off.

3.0 Economic Value of Oak Resources

This section summarizes research regarding the economic values of oak woodlands. The natural resources values of oak woodlands presented in Section 2 underlie the economic values described in this section. Therefore, community economics will be affected as the extent and quality of the resource diminishes. Oak woodlands in El Dorado County provide economic value to landowners and the community at large. In addition to providing a source for firewood and other wood products, oak woodlands support important economic activities such as grazing and recreation, enhance land values, and play a critical role in the healthy functioning of aquatic and terrestrial ecosystems throughout the County.

3.1 Support of Important Economic Activities

Agriculture and recreation-based tourism are important industries in El Dorado County. According to the 2014 El Dorado and Alpine Counties Agricultural Crop and Livestock Report produced by the Agricultural Commissioner (El Dorado County 2014), the impact of agriculture on El Dorado County's economy was estimated at $433 million in 2014. According to the 2012 Field Report from the California Department of Conservation's Farmland Mapping and Monitoring Program (California Department of Conservation 2014), much of the area on the west slope – 193,794 acres or 36% of the county – is categorized as grazing land. Oak woodlands provide shade, forage, and sources of water for livestock. The economic value of pasture and rangeland (crops only, not including the value of livestock) was about $5.77 million in 2014 (El Dorado County 2014).

In addition to agricultural operations, oak woodlands support many recreation activities in El Dorado County. With more than 25% of its lands owned by the U.S. Forest Service, El Dorado County provides substantial recreation opportunities. The extensive public land, as well as privately owned orchards, wineries, recreation facilities, and timberlands, combine to create a major scenic and recreational attraction for tourism in the County. The scenic beauty of the County's oak woodlands is an important part of the attraction. In addition, deer and other game species that depend on oak woodland habitat contribute to recreational hunting opportunities on public lands and through hunting leases on private lands, which in turn generate revenues for land owners that help keep many ranches viable.

Oak woodlands also support other recreation activities such as camping, fishing, hiking, bird-watching and equestrian activities that contribute to a high quality of life for residents and attract visitors. Businesses that depend on and directly benefit from recreation-based tourism include recreation services, lodging, food services, restaurants, service stations, and retail trade. Tax revenues generated by recreation activities and agri-tourism help support governmental operations in El Dorado County.

3.2 Contribution to Land Value

Property values are a function of location, improvements, and other amenities. Numerous studies have shown that the presence of oak woodlands enhance land values by providing shade (energy conservation) and wind break benefits, absorbing sound, serving as a land use buffer, providing

erosion control and contributing to aesthetic beauty. A study by Standiford and Scott (2001) in Riverside County quantified how aesthetic and environmental values of adjacent oak woodland open space are captured in parcel sales prices. The project determined that natural resources in a broad geographic area contribute to the economic value of real property and the overall value of an entire community. This increased value provides an economic incentive for investing in conservation.

Standiford (1999) and Giusti et.al. (2005) also show that oak trees can offer higher real estate market yields over bare land. Standiford's study also illustrated that individual oak trees of large size and heritage status have been found to contribute to the value of parcels. Increases in property values contribute to increases in property tax revenues for a county. Conversely, however, a conservation easement permanently reduces the development potential on a parcel and therefore potential tax revenue that could result from the highest developable use allowed on the property.

3.3 Contribution to Ecosystem Function

As discussed in Section 2 (Natural Resource Values of Oak Woodlands), oak woodlands contribute to the healthy functioning of both aquatic and terrestrial ecosystems. Important ecosystem functions to which oak woodlands contribute include providing habitat, maintaining water quality and supporting water supplies, and providing other watershed services such as improving soil structure, increasing infiltration rates, reducing soil erosion and sedimentation, and enhancing nutrient cycling and soil fertility. Although placing a monetary value on these services is challenging and imprecise, recent research has made strides in better understanding the importance and value of these services to society.

One study recently conducted by the Spatial Informatics Group (Troy and Wilson 2006) on the value of services provided by oak woodlands suggests that the habitat value of oak woodlands is about $117 per acre per year. This value reflects society's willingness to pay for maintaining oak woodland habitat that supports healthy populations of species that depend on oak woodlands. Although monetary values for other ecosystem functions, such as watershed services, to which oak woodlands contribute are not available, the value of the services, including infiltration and control of erosion and sedimentation (in terms of the avoided cost to society of having to duplicate these services by alternative means such as water treatment), is certainly substantial.

Lastly, the role of oak woodlands in contributing to climate effects should be acknowledged. Two studies (Birdsey 1992, Tol 2005) examined the contribution that oak woodlands make to regulating atmospheric carbon dioxide, a greenhouse gas. According to these studies, the carbon sequestration services that oak woodlands provide are valued at between $33 and $83 per acre per year.

4.0 Priority Conservation Areas

To establish an effective oak resources management program that fulfills the 2004 General Plan policies for oak resources mitigation and conservation purposes, locations need to be identified that meet the Goals and Objectives presented in the ORMP. Areas for conservation easements need to possess the oak woodland habitat characteristics summarized in Section 2 (Natural Resource Values of Oak Woodlands). Furthermore, to develop an in-lieu fee, the potential locations of conservation lands need to be known to estimate the costs of acquisition.

From the goals identified in the ORMP, oak woodland habitats were analyzed by:

1. Using the best geographic information on oak woodlands that is currently available for the entire ORMP area;

2. Considering oak woodland habitat evaluation criteria based on the adopted 2004 General Plan policies; and

3. Completing a mapping process that is objective, replicable, and supportable for the intended purpose of identifying oak woodlands that will receive priority for the mitigation and conservation purposes of this ORMP.

The County mapping process concluded by identifying the Priority Conservation Areas (PCAs) shown in Figure 2 of the ORMP. Figure 2 of the ORMP was the result of dozens of mapping exercises and criteria. Overall, the approach was to start with the resource (oak woodlands) and then identify which areas would be most consistent with the policies and land use designations of the 2004 General Plan.

The ORMP is an updated version of the plan adopted by the El Dorado County Board of Supervisors on May 6, 2008. While other sections of the ORMP present oak woodland habitat coverage based on 2015 FRAP data, the PCAs were not updated in preparation of this ORMP. Therefore, the discussion of data sets and methods presented Section 4.1 are taken directly from the 2008 version of the ORMP and are based on the 2002 FRAP oak woodland data set. Since the extent of oak woodland habitat in the ORMP area changed only slightly between the 2002 and 2015 FRAP data sets, the PCAs identified in the 2008 ORMP are considered to still be viable and are incorporated into this plan. Section 4.1 below summarizes the efforts taken to develop the PCAs, while Section 4.2 presents the extent of oak woodlands in PCAs, as calculated from the 2015 FRAP data set. Finally, Section 4.3 discusses criteria for identifying oak woodland conservation areas that lie outside of the PCAs identified herein.

4.1 Priority Conservation Area Mapping

Priority Conservation Area mapping was conducted in two phases:

- Phase 1 (Identifying Oak Woodland Resources): Considering all oak woodland types in the ORMP area, resource and habitat mapping criteria were considered, selected, and

then applied. Large expanses of oak woodlands greater than or equal to (≥) 500 acres were identified; and

- Phase 2 (Prioritizing Conservation Areas): Using parcel size information from the Phase I results, and land use designations from the 2004 General Plan, the large expanses of oak woodlands were narrowed to those lands where: 1) oak woodland habitats would not likely undergo substantial fragmentation; and 2) oak woodland conservation would be largely consistent with the 2004 General Plan land use designations. These large expanses were classified as PCAs.

PCA mapping was based on GIS data available from state and county sources in ESRI ArcMap-compatible format. A discussion of the data sets, processes, and intermediate mapping efforts are described below.

4.1.1 Mapping Data Sets

4.1.1.1 Oak Woodland Data

The existing vegetation coverage data used in defining the PCAs is a mosaic of the USDA Forest Service (USFS) Remote Sensing Lab's (RSL) existing vegetation data (CALVEG) Tiles 19, 20, and 21. The tiles were merged and then clipped with the ORMP area boundary layer to create a vegetation coverage data set for the entire ORMP area. To determine oak woodland areas, a selection from the RSL vegetation data set was made where the attribute field 'WHRTYPE' equaled blue oak-foothill pine (BOP), blue oak woodland (BOW), valley oak woodland (VOW), montane hardwood (MHW), and montane hardwood-conifer (MHC). The 'WHRTYPE' attribute field correlates directly to the CWHR classifications discussed previously in this ORMP. Valley foothill riparian was not included as it did not appear in the data set for this region. The selected polygons were then exported as a new "Oak Woodlands" layer.

4.1.1.2 Other Relevant Data

In addition to the oak woodlands data set, other GIS data was necessary to create the PCA boundaries. Community Regions, Rural Centers, parcels, land use, street centerline, and County boundary data sets were provided by the El Dorado County GIS department. The USFS boundary was obtained from the USFS Pacific Southwest Region GIS clearinghouse. The water bodies and hydrology layers was obtained from the California Spatial Information Library (CaSIL). Elevation data was acquired from a United States Geological Survey (USGS) 30-meter Digital Elevation Model (DEM) that was also supplied by the El Dorado County GIS department. The County boundary polygon was clipped with the 4,000-foot contour to produce the ORMP area boundary layer.

4.1.2 Large Expanses of Oak Woodland

Initial Mapping of Large Expanses of Oak Woodland was created by dissolving the Oak Woodlands layer that removed boundaries between contiguous polygons. An acreage calculation was applied to the new aggregate polygons and a selection of all polygons >= 500 acres was made. This selection was then exported to a "Large Expanse of Oak Woodland" layer. Large

Expanses of Oak Woodlands identification was a first step towards a resource-based approach to begin identifying areas that could be considered a priority for conservation or mitigation. The total acreage of the Large Expanses of Oak Woodlands was 219,494.

4.1.3 Initial Mapping of Priority Conservation Areas

As previously discussed, oak woodland functions most effectively and provides the greatest habitat value in large contiguous expanses. In order to select the most effective areas to target for acquisition of oak woodland conservation easements from willing sellers, PCAs were developed. Early modeling of oak woodland corridors represented an attempt to create a PCA map. That mapping effort further reduced large expanse areas and modeled narrowly defined oak woodland habitat plus all other BOP and BOW habitats. All other BOP and BOW habitats were included at this point to provide those CWHR habitat types an increased conservation emphasis due to their reported low rate of regeneration. This version of the model qualified all areas with a score >= 10. The scoring criteria were as follows:

- Areas of Large Expanses of Oak Woodland = 5 pts
- Areas of 'undeveloped land' (defined as having a USECDTYPE attribute value of "VAC" in the County parcel database) = 5 pts
- Parcel Size = variable (see Table 4-1 below)
- Land Use Designation = variable (see Table 4-2 below)

Table 4-1: Parcel Size

Parcel Size (Acres)	Score (pts.)
< 5	1
≥ 5 < 10	2
≥ 10 < 20	3
≥ 20 < 40	4
≥ 40	5

Table 4-2: Land Use Designation		
Land Use Code	**Description**	**Score**
AL	Agricultural Lands	5
AP	Adopted Plan	1
C	Commercial	1
HDR	High Density Residential (1-2/ac)	1
I	Industrial	1
LDR	Low Density Residential (5-10 acres)	2
MDR	Medium Density Residential (1-5 acres)	1
MFR	Multi-Family Residential (5 units/ac)	1
NR	Natural Resources	5
OS	Open Space	5
PF	Public Facilities	1
RD	Research and Development	1
RR	Rural Residential (10-160 acres)	4
TR	Tourist Recreational	1

The layers were converted to a raster format with a cell size of 100 feet. The cell values were then recalculated to reflect their model scores. All layers were then added together using raster math to create a model output with possible scores of 2 to 20. Any cell with a value greater to or equal to 10 was qualified. Any BOW or BOP polygons that did not already have a score >= 10 were then added back in to create the initial PCA layer.

To calculate the PCA acreage under County jurisdiction, State and Federal lands (in the Government Ownership (1997) shapefile obtained from CaSIL) were then clipped from the PCA layer and the calculation was performed. Then, all of the State and Federal lands were removed from the map to assess their importance in identifying PCAs.

As the mapping progressed, an increasing effort was made to narrow PCAs to those areas that are most consistent with the 2004 General Plan land use designations. Because the General Plan concentrates land development within the Community Regions and Rural Centers (CR/RC) where oak woodland impacts and fragmentation are most likely, potential PCA designations were removed from these areas. The distribution of PCAs with the CR/RC removed was then reviewed. The IBC layer was added to this map to assess the geographic relationship of IBCs to PCAs.

4.1.4 Finalization of Priority Conservation Areas

After the final round of mapping, it was determined that PCAs are designed to be large expanses of oak woodland greater than 500 acres and coincident with parcels greater than 40 acres. The General Plan concentrates land development within the Community Regions and Rural Centers (CR/RC) where oak woodland impacts and fragmentation are most likely, so potential PCA designations were removed from these areas, as well as from land uses designated for

commercial and industrial development. Additional oak woodlands were removed as potential PCAs where the 2004 General Plan designates Low Density Residential (LDR) land use.

A map titled "Revised Priority Conservation Areas (without Corridors) without Commercial or Industrial Lands" displayed a later iteration of the large expanses of oak woodland habitat model. This version included Large Expanses of Oak Woodlands, undeveloped parcels with oak woodlands that are 10 acres or larger and all VOW habitat, but it excluded "commercial" and "industrial" designated lands in the County's land use database, and State and Federal lands. Because there was no scoring, this model was created not by raster math as the previous model, but instead by simply clipping from the Large Expanses of Oak Woodlands layer any areas that did not qualify and then adding back in all VOW habitat.

A later map titled "Revised Priority Conservation Areas (without Corridors) – Parcels 40 Acres and Larger" identified PCAs as any large expanses of oak woodland on undeveloped parcels 40+ acres in size, plus all VOW habitat, and excludes CR/RC, and all State and Federal lands. This was displayed over a backdrop of all CWHR oak woodland types. This map was also created by clipping selected layers against the Large Expanses of Oak Woodlands layer.

A map (El Dorado County Oak Woodland Habitat) was developed by County staff and presented at the June 25, 2007 Board of Supervisors workshop on the status of the ORMP mapping. The map represented the prior map described, with additional PCAs removed where the 2004 General Plan designates Low Density Residential land use.

For the final map, some data clean-up and further analysis was needed to link the PCAs. PCAs are designed to be large expanses of oak woodland greater than 500 acres and coincident with parcels greater than 40 acres. However, the above 'filtering' left many smaller fragments of oak woodland areas. Acreage calculations were therefore made on each remaining block of oak woodland and the blocks were grouped by size class. Isolated fragments less than 10 acres were removed from subsequent analysis. Areas greater than or equal to 500 acres were selected to be the final proposed "Priority Conservation Areas" for the Public Review Draft ORMP. This final proposed PCA map was subsequently adopted with the 2008 ORMP and represents the current extent of PCAs presented in this ORMP.

4.2 Current Oak Woodland Acreage in Priority Conservation Areas

Figure 2 in the ORMP titled "Priority Conservation Areas, Oak Woodlands, and Public Lands in El Dorado County" illustrates those PCAs where Conservation Fund In-Lieu Fee mitigation will be targeted for oak woodland conservation easements from willing sellers. Based on a comparison of the PCA extents and the 2015 FRAP oak woodland habitat data, the estimated acreages of oak woodland types within the PCAs are shown below in Table 4-3.

Table 4-3: Oak Woodlands in Priority Conservation Areas	
Oak Woodland Type	**Priority Conservation Areas (Acres)**
Blue oak woodland (BOW)	11,032
Blue oak-foothill pine (BOP)	10,272
Montane hardwood (MHW)	11,752
Montane hardwood-conifer (MHC)	2,232
Valley oak woodland (VOW)	410
Total Oak Woodland Area	**35,698**

4.3 Criteria for Conservation Outside of Priority Conservation Areas

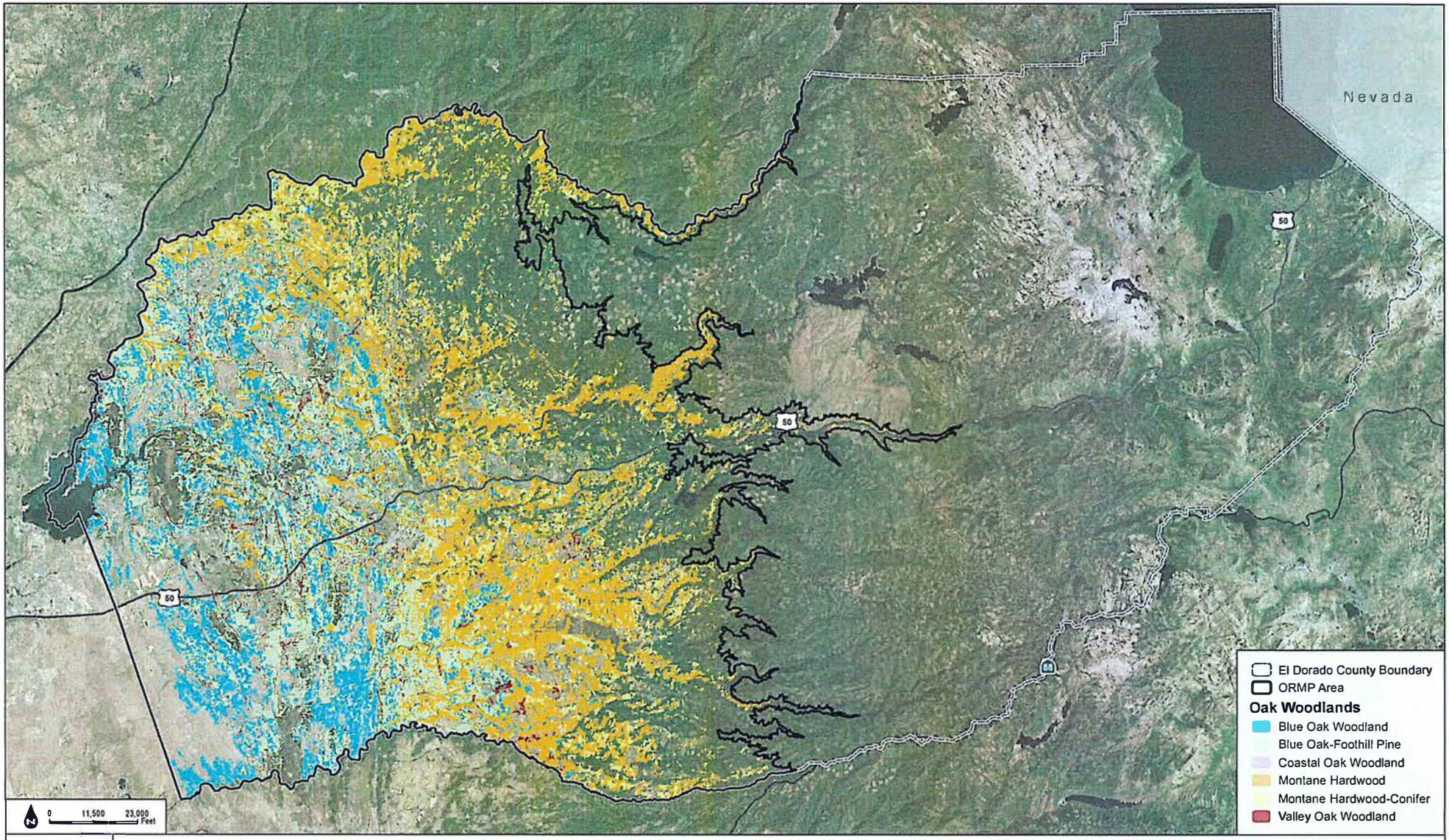
The PCAs have been delineated to prioritize the acquisition of land or oak woodland conservation easements either by the County (using the funds collected in the County's Oak Woodland Conservation Fund) or privately by developers. However, acquisition of land or oak woodland conservation easements outside of the PCAs may also occur. The following criteria shall be used for selecting potential oak woodlands conservation lands or easements outside of PCAs, consistent with General Plan Policy 7.4.2.8 (D):

- Location within IBCs;
- Location within other important ecological areas as identified in the Initial Inventory and Mapping (June 2010);
- Woodlands with diverse age structure;
- Woodlands with large trees and dense canopies;
- Opportunities for active land management to be used to enhance or restore natural ecosystem processes;
- Potential to support special-status species;
- Connectivity with adjacent protected lands;
- Parcels that achieve multiple agency and community benefits;
- Parcels that are located generally to the west of the Eldorado National Forest; and
- Parcels that would preserve natural wildlife movement corridors such as crossings under major roadways (e.g., U.S. Highway 50 and across canyons).

Land or conservation easement acquisition as mitigation of oak woodland impacts that occurs outside of PCAs shall occur on minimum contiguous habitat blocks of 5 acres (the acquired land or conservation easement shall be contiguous to or shall create a contiguous area of no less than 5 acres of oak woodland in conserved or open space status (e.g., parks, national forest, other conserved oak woodlands on private property). For transactions where land is acquired or a conservation easement outside of the PCAs is negotiated between a developer and a private seller, an analysis of the proposed oak woodland conservation area shall be performed by a qualified professional to demonstrate that the proposed conservation area is of equal or greater

biological value as the oak woodland proposed to be removed. The analysis of conservation areas shall be included as a component of an oak resources technical report.

Should the County elect to purchase land or oak woodlands conservation easements outside of PCAs using funds from its Oak Woodland Conservation Fund, an analysis of the proposed oak woodland conservation area shall be performed by a qualified professional to determine its suitability in meeting the criteria listed above.



SOURCE: Bing Maps 2016, FRAP 2015

DUDEK

FIGURE A-1

Oak Woodland Distribution in ORMP Area

This page intentionally left blank.

5.0 Thresholds of Significance for the Loss of Oak Resources

Upon receipt of an application for a permit or other discretionary approval, the County is required to determine whether the project would potentially have a significant effect on the environment. If the County determines that the project could potentially have a significant effect, the County is required to conduct a review of the proposed project, pursuant to the California Environmental Quality Act (CEQA). Part of this review requires the County to determine whether a proposed project within its jurisdiction may result in a conversion of oak woodlands that may have a significant effect on the environment (PRC §21083.4). PRC §21083.4 also identifies four mitigation options for projects that result in significant impacts to oak woodlands. This ORMP identifies mitigation options that are consistent with PRC §21083.4 and the County's General Plan policies. Specifically, once the extent and severity of oak woodland impacts are determined at a project level, the mitigation standards of the ORMP, which have been developed to be consistent with PRC §21083.4, will be applied as described in the ORMP. With respect to oak woodlands, compliance with the ORMP will constitute mitigation.

This ORMP also identifies mitigation requirements and options for impacts to individual oak trees that lie outside of oak woodlands, as well as specific mitigation for Heritage Trees. Mitigation is required for all trees meeting the definition of a Heritage Trees, whether or not the tree occurs in an oak woodland that is already subject to oak woodland mitigation requirements.

6.0 Mitigation for the Loss of Oak Resources

El Dorado County's General Plan policies identify mitigation standards and requirements for projects that impact oak woodlands and oak trees, including specific mitigation for Heritage Trees. This ORMP provides a comprehensive approach for project-level oak woodland mitigation and simultaneously considers 'landscape level' conservation goals. Subsequent to adoption of the County's General Plan, several policies related to oak resources and special-status species were updated. This ORMP incorporates those policy updates and maintains consistency with current state-level requirements for oak woodland mitigation.

Mitigation options for impacts to oak woodlands have been identified in this ORMP and include options for on- or off-site conservation, on- or off-site tree planting, and/or in-lieu fee payment. Mitigation options for impacts to individual trees (including Heritage Trees) have also been identified in this ORMP and include options for on- or off-site tree planting and/or in-lieu fee payment. Consistent with PRC §21083.4, tree planting used to mitigate impacts to oak woodlands may not exceed 50 percent of the required mitigation.

Detailed mitigation standards for implementation of Policy 7.4.4.4 are outlined in Section 2 of the ORMP. The methodology for the developing the Conservation Fund In-Lieu Fee is detailed in Appendix B.

7.0 Resources

"Guidelines for Maintenance, Restoration, and Rehabilitation of Oak Woodlands and How to Grow California Oaks" (Appendix E; McCreary 1995) may be helpful in developing a tree replacement plan.

The UC Cooperative Extension can provide information to assist revegetation and restoration activities. Appendix F (Resources) provides contact information for this and other sources of information.

Wildfire in the wildland urban interface (WUI) and wildland urban intermix can produce catastrophic dangers to the public, firefighters, and to the vegetated landscape, which includes oak woodlands. California Public Resources Code (PRC) Section 4291 requires a person who owns, leases, controls, operates, or maintains a building or structure adjoining land covered with flammable material to maintain defensible space. Specifically, PRC §4291 requires 100 feet of defensible space (or to the property line, whichever is nearer) to be maintained around all buildings and structures. Fire inspection officials under PRC §4119 are given the authority to enforce PRC §4291. This authority allows fire inspection officials to enforce defensible space measures that involve vegetation modification and removal.

Fire Safe Plans are identified in General Plan Policy 6.2.2.2, which states:

> The County shall preclude development in areas of high and very high wildland fire hazard or in areas identified as "urban wildland interface communities within the vicinity of Federal lands that are a high risk for wildfire," as listed in the Federal Register of August 17, 2001, unless such development can be adequately protected from wildland fire hazard, as demonstrated in a Fire Safe Plan prepared by a Registered Professional Forester (RPF) and approved by the local Fire Protection District and/or California Department of Forestry and Fire Protection.
> Fire Safe Plans address emergency access, signing and building numbering, emergency water standards, and fuel modification standards. These plans are equivalent to Fire Protection Plans, defined in Chapter 47 of the California Fire Code as:
>
> "A document prepared for a specific project or development proposed for a Wildland Urban Interface Fire Area. It describes ways to minimize and mitigate potential for loss from wildfire exposure."

As noted, Fire Safe Plans in El Dorado County are documents written by a Registered Professional Forester (RPF) that address basic wildland fire protection standards of the California Board of Forestry and Fire Protection in relation to a proposed project or parcel split. The authority for these regulations is found within PRC §4290 and Title 14 CCR 1270-1276. These regulations have been adopted with amendments by El Dorado County. Fire Safe Plans are reviewed and approved by the local fire district where the project is being planned as well as by CAL FIRE. Fire Safe Plans incorporate the defensible space requirements of PRC §4291 and may make recommendations for fuel (vegetation) modification outside of the 100 foot defensible space zone. Such fuel modification recommendations outside that required under PRC §4291 are

designed to modify fire behavior such that the safety of emergency firefighting personnel is heightened, and the evacuation of civilians during a wildland fire is expedited. Fuel modification or defensible space zones provide a point of attack or defense for firefighters during a wildland fire.

Information from CAL FIRE regarding defensible space requirements (PRC §4291) can be obtained from the CAL FIRE website listed in Appendix F. Defensible space information and fire safety planning resource information is also available through these resources:

- CAL FIRE's Defensible Space information: http://www.readyforwildfire.org/defensible_space/
- El Dorado Fire Safe Council: http://www.edcfiresafe.org

8.0 Monitoring and Reporting

Two types of monitoring and reporting will be required under this ORMP:

- The status of replacement tree plantings in satisfaction of oak woodland or individual native oak tree mitigation requirements; and
- Status reporting on conserved oak woodlands managed by the County or land conservation organization.

8.1 Replacement Tree Plantings

Project specific monitoring and reporting requirements for replacement plantings will be outlined in project specific oak resources technical reports developed pursuant to Section 2.5 of the ORMP and prepared by a qualified professional. The oak resources technical reports will include quantifiable success criteria for the replacement plantings, and will require that monitoring reports shall be submitted to the County at least annually during the 7-year maintenance and monitoring period and documentation of replacement planting success shall be provided to the County at the end of the 7-year monitoring and maintenance period (final monitoring report). Specific details regarding the replacement planting guidelines are included in Section 2.4 of the ORMP.

A qualified professional is an arborist certified by the International Society of Arboriculture (ISA), a qualified wildlife biologist, or a registered professional forester (RPF), as described below.

Registered Professional Forester (RPF) is a person licensed by the State of California to perform professional services that require the application of forestry principles and techniques to the management of forested landscapes. RPFs have an understanding of forest growth, development, and regeneration; soils, geology, and hydrology; wildlife and fisheries biology and other forest resources. RPFs are also trained in fire management and, if involved in timber harvesting operations, have expertise in both forest road design and application of the various methods used to harvest (California Board of Forestry and Fire Protection 2016a, California Board of Forestry and Fire Protection 2016b).

Certified Arborist A person certified by the International Society of Arboriculture (ISA) that provides professional advice regarding trees in the County.

Qualified Wildlife Biologist is a professional with a BA or BS or advanced degree in biological sciences or other degree specializing in the natural sciences; professional or academic experience as a biological field investigator, with a background in field sampling design and field methods; taxonomic experience and knowledge of plant and animal ecology; familiarity with plants and animals of the area, including the species of concern; and familiarity with the appropriate county, state, and federal policies and protocols related to special status species and biological surveys.

8.2 Status Reports to the Board of Supervisors

The County shall deposit all oak woodland in-lieu fees into its Oak Woodland Conservation Fund, which shall be used to fund the acquisition of land and/or conservation easements from willing sellers. A portion of the fund shall also be used for ongoing monitoring and management activities, including but not limited to fuels treatment, weed control, periodic surveys, and reporting. Reporting shall be to the Board of Supervisors no less than every other March and shall address the status of conserved oak woodlands in the County and whether adjustments to the oak resources in-lieu fee are necessary to reflect current acquisition and operating costs.

8.3 Adaptive Management

The success of the ORMP in meeting goals and objectives of the 2004 General Plan will be measured through the Monitoring and Reporting program. The County will implement adaptive management by: 1) revising guidelines for projects as necessary, and 2) revising the ORMP and the mitigation fee. If the Goals of the ORMP are not being met, then the County will review and revise the ORMP as necessary.

9.0 Administration of the Oak Woodland Conservation Program

Following the Board of Supervisors' adoption of this plan, the County will implement the components of the ORMP. The major components of the administration program will include:

1) A County maintained database for the separate accounting of oak woodland conservation grants and in-lieu fees, and the separate tracking of acreages of oak woodland impacts and conservation/preservation and restoration for annual review and reporting by the County. This database will be used to track the monitoring and reporting information described in Section 8; and

2) One or more entities approved by the Board of Supervisors to assist in the management, maintenance, monitoring or restoration of oak woodlands acquired for any purpose authorized under this ORMP. In this context, oak woodlands are considered "acquired" if the lands are acquired in fee, or subject to oak tree conservation easements for the purpose of oak woodland conservation.

10.0 Education and Outreach

The 2008 version of the ORMP was developed with public input gathered between mid-2006 and May 2008. This ORMP update also incorporated public input gathered at a series of Board hearings between January 13 and September 30, 2015.

One component of the ORMP provides for the voluntary conservation or management of oak woodlands within working landscapes. The sale of oak tree conservation easements on properties in identified Priority Conservation Areas (PCAs) is voluntary and depends upon the availability of a pool of willing sellers. An education and outreach program to inform landowners of the opportunities for oak woodland conservation will be essential to the success of the ORMP. The education and outreach program should identify the economic, aesthetic, agricultural and natural resource/biological values of oak woodland conservation.

The County will maintain, and make available to the public, a list of sources of information and other resources concerning oak woodland conservation, replanting and successful maintenance of oak woodlands as part of working landscapes. A partial listing is provided in Appendix F.

11.0 Partnering to Achieve Goals of the ORMP

This section identifies specific opportunities for the County to partner with others to achieve the Goals of this ORMP. To the extent that partnerships can be established, the County's residents will benefit both in the conservation achieved and in the reduced costs for ORMP actions. No partnerships will be sought for activities related to mitigation; such costs will be solely the responsibility of the landowners or developers responsible for oak woodland impacts. Partnering opportunities may include governmental agencies, public utilities, non-profit organizations or private entities.

This plan identifies PCAs for oak woodlands that fulfill the purposes described in the ORMP. One of the purposes is to provide a landscape-level planning document for the long-term conservation of oak woodlands for reasons other than mitigation for development. These include joint planning efforts with non-profit organizations, resource agencies, and other land management agencies (e.g., Placer and Amador counties, Wildlife Conservation Board, and land trusts) that are seeking to coordinate regional-level oak woodland conservation. Joint efforts by the County with these organizations and willing landowners can increase and help to maximize the value of available funds for broader-scale goals that will meet many other conservation goals and policies of the 2004 General Plan.

As a part of an application for grant funding for certain activities, such as acquisition of conservation easements, some programs may require the County to certify that the proposed project is consistent with this ORMP. One such program includes grant funding for conservation easement acquisitions available under the Oak Woodlands Conservation Program. To qualify for such grant funding by the Wildlife Conservation Board (WCB), the County agrees, pursuant to Section 1366 (f) of the Fish and Game Code, to certify that individual proposals are consistent with the County's ORMP. In order to facilitate and expedite, where feasible, such grant funding applications, the County will develop an ORMP Consistency Certification process. This process will include an application form and may contain a list of criteria or examples of projects which would be consistent or inconsistent with this ORMP.

The WCB's criteria are as follows:

> "To qualify for funding consideration for a restoration, enhancement, purchase of an oak conservation easement or long-term agreement, projects must meet one or more of the following criteria, must contain an appropriate management plan to assure project goals are maintained and the oak stand must have greater than 10 percent canopy:
>
> - The project is of sufficient size to provide superior wildlife values.
> - The project area contains a diverse size-class structure of oak woodlands and/or a diversity of oak species that will promote the sustainability and perpetuation of oak woodlands.
> - The property is adjacent to other protected areas or will promote the sustainability and perpetuation of oak woodlands.

- The property is adjacent to other protected areas or will contribute toward ease of wildlife movement across ownerships.
- The project contributes toward regional or community goals, provides scenic open-space, protects historic or archeological values, or contains unique geologic features.
- The property is a working landscape. The landowners have implemented or agree to implement stewardship practices that recognize and incorporate the ecological requirements of oak woodlands and associated habitats, thus promoting the economic and resource sustainability of the farming and ranching operation.
- The property removes or reduces the threat of habitat conversion from oak woodlands to some other use.
- The project has the potential to serve as a stewardship model for other landowners."

Examples of projects which would be consistent and therefore encouraged would include acquisition of conservation easements from willing sellers which enhance connectivity of PCAs to one another or to existing protected lands, or which provide or preserve wildlife corridors across 4-lane roadways, or larger.

Projects which would be inconsistent with this ORMP might include acquisition of conservation easements or other interests in land which would interfere with the provision of public infrastructure such as major roads or other transportation projects, water storage and transmission lines, wastewater treatment facilities, schools sites and sites designated as locations for higher density residential land uses which have the potential to provide housing affordable to lower and moderate income households.

The following sections present potential partners with which El Dorado County may collaborate on oak woodland conservation projects.

11.1 Governmental Partners

1. Wildlife Conservation Board (WCB)
   https://www.wcb.ca.gov/Programs/Oaks

The WCB is a separate and independent Board with authority and funding to carry out an acquisition and development program for wildlife conservation. The WCB's three main functions are land acquisition, habitat restoration, and development of wildlife oriented public access facilities. These activities are carried out under the following eight programs: Land Acquisition Program, Public Access Program, Habitat Enhancement and Restoration Program, Inland Wetlands Conservation Program, California Riparian Habitat Conservation Program, Natural Heritage Preservation Tax Credit Program, Oak Woodlands Conservation Program, and The Rangeland, Grazing Land and Grassland Protection Program.

2. El Dorado County and Georgetown Divide Resource Conservation Districts (RCD)
   http://www.eldoradorcd.org/

The El Dorado County and Georgetown Divide RCDs are grassroots government organizations that advise and assist individual landowners and public agencies in planning and implementation of conservation practices for the protection, restoration, or development of land, water, and related natural resources. RCDs are a local government entity and can work with any local, state or federal agency through simple cooperative agreements. RCDs advise and assist individual landowners and public agencies in planning and implementation of conservation practices for the protection, restoration, or development of land, water, and related natural resources.

3. Natural Resources Conservation Service (NRCS)
   http://www.nrcs.usda.gov/partners/

The NRCS is the federal agency that works hand-in-hand with the American people to conserve natural resources on private lands. Formerly the Soil Conservation Service, NRCS brings 60 years of scientific and technical expertise to the Partnership.

Locally, the El Dorado County and Georgetown Divide Resource Conservation Districts are co-located with the NRCS and are normally the point of contact.

4. California Department of Forestry and Fire Protection (CAL FIRE)
   http://calfire.ca.gov/resource_mgt/resource_mgt.php

The Resource Management Program within CAL FIRE has a goal of maintaining the sustainability of natural resources. Several programs under the Resource Management Program can help to protect oak woodlands. The Vegetation Management Program (VMP) is a cost-sharing program that focuses on the use of prescribed fire, and mechanical means, for addressing fire fuel hazards. The VMP allows private landowners to enter into a contract with CAL FIRE to use prescribed fire to accomplish a combination of fire protection and resource management goals. The Forest Legacy Program (FLP) is a voluntary program to protect working forests, including oak woodlands. The FLP promotes the use of conservation easements to maintain traditional forest benefits as timber production, wildlife habitat, watershed protection and/or open space. The California Forest Improvement Program (CFIP) is a forestry incentive program whose purpose includes the protection, maintenance, and enhancement of forest resources. The CFIP is a cost-share program that can fund preparation management plans, RPF supervision, and oak tree planting, thinning, and pruning activities. While meeting its responsibilities under The Forest Practice Act, CAL FIRE is actively involved in timberlands that contain much of the County's California black oak population. In addition, CAL FIRE's responsibility includes review of Fire Safe Plans (General Plan Policy 6.2.2.2) and enforcement of PRC §4291 (defensible space).

5. Bureau of Land Management (BLM)
   http://www.blm.gov/ca/st/en/fo/folsom.html

The BLM has a long history of collaborating with communities to manage public lands for multiple uses in three broad categories: commercial activities, recreation, and conservation. The Mother Lode Field Office is directly responsible for approximately 230,000 acres of Public Land scattered throughout fourteen Central California counties from Yuba County (in the north), to Mariposa County (in the south). Most of the acreage, with the exception of Cosumnes River Preserve in southern Sacramento County, is within the historic Mother Lode region of the Sierra Nevada Range.

The Mother Lode Field Office has adopted a Sierra Resource Management Plan (RMP) that will guide the management of all public lands under the jurisdiction of the Mother Lode Field Office for years to come. The RMP contains goals, objectives, and land-use allocations, as well as specific rules and regulations for different activities. It is literally that office's "blueprint for action." Acquisition of blue oak woodlands that meet county objectives for habitat conservation is identified as a management action in the adopted RMP.

6. United States Department of Agriculture, Forest Service
   http://www.fs.usda.gov/eldorado/

The Eldorado National Forest (ENF) extends into the eastern boundary of the ORMP area. California black oaks are emphasized in the Land and Resource Management Plan as important components of the ecosystem. Opportunities to develop cooperative efforts with the ENF may exist.

7. University of California Cooperative Extension (UCCE) – Central Sierra
   http://cecentralsierra.ucanr.edu/Natural_Resources/

The Natural Resources Program provides forestry, wildlife, rangeland, watershed management and other natural resource related information to a wide variety of county residents and visitors. The goal is to promote sound management and conservation of the region's natural resources, through research, educational activities, and good working relationships with a broad range of people. The main clientele for this program are private landowners, resource management professionals working on private, State and Federal lands, users of public lands, conservation organizations, and the agriculture and forest products industries. The Natural Resources Program examines forest resources and hardwood rangeland including soil, water, vegetation and wildlife.

8. City of Placerville
   http://www.cityofplacerville.org/

The City of Placerville General Plan identifies the retention of tree canopy, which includes oaks, as important. The City currently is contemplating a comprehensive plan for Hangtown Creek, which is a major tributary of Weber Creek. Placerville and the County share land management

planning responsibilities for very critical oak woodland along Weber Creek and several other major tributaries of the South Fork of the American River.

9. County of Placer Community Development Resource Agency
   http://www.placer.ca.gov/departments/communitydevelopment

Placer County, adjacent to El Dorado County along its northern boundary, has two programs designed to address natural plant communities, which include oak woodlands.

Placer Legacy is a countywide, science-based open space and habitat protection program. Placer Legacy will result in a comprehensive open space plan for Placer County that preserves the diversity of plant and animal communities in the County and addresses a variety of other open space needs, from agriculture and recreation to urban edges and public safety. Placer Legacy will help maintain the County's high quality of life and promote economic vitality. It is totally voluntary - only willing buyers and willing sellers participate. It is based on the existing County General Plan and community plans, so it doesn't require land-use or zoning changes. It is non-regulatory - no new regulations are adopted to meet the objectives of the program.

The Placer County Conservation Plan is intended to address the impacts associated primarily with unincorporated growth in west Placer and growth associated with the buildout of Lincoln's updated General Plan. Development in western Placer County will require the preservation of approximately 54,300 acres of land between now and 2050.

Opportunities may exist to collaborate to create PCAs across administrative county lines, and to share information that affects oak woodlands in the Sierra foothill region.

10. Amador County
    http://www.co.amador.ca.us/departments/planning/current-general-plan-document

Amador County is updating its general plan. Opportunities may exist to collaborate to create Priority Conservation Areas across administrative county lines, and to share information that affects oak woodlands in the Sierra foothill region.

11. El Dorado Hills Community Service District
    http://www.eldoradohillscsd.org/

The El Dorado Hills Community Service District has an extensive network of greenbelts. Opportunities may exist to plant small areas of oaks and to conduct fuels treatment activities within the greenbelts.

12. Cameron Park Community Service District
    http://www.cameronpark.org/

Several of the largest preserves in El Dorado County exist within or adjacent to the Cameron Park Community Service District boundary. The preserves support a mixture of chaparral and

woodland types. Some opportunities for oak planting or enhancement of existing stands may exist.

13. El Dorado County Agriculture Department
https://www.edcgov.us/Ag/

The Agriculture Department's mission is to protect, enhance and promote the preservation of agriculture and the environment while sustaining the public health, safety and welfare of all citizens, and to provide consumer and marketplace protections through the fair and equitable enforcement of laws and regulations.

Through other General Plan objectives and policies, the Department can help identify ways to maintain or to establish links between oak stands in agricultural areas.

14. El Dorado County Department of Parks and Trails
https://www.edcgov.us/Parks/

The Parks and Trails Department manages the River Management Plan on the South Fork of the American River. The Plan overlaps important oak woodland corridors along the river. The Department is responsible for the development of regional parks and smaller parks within the County. An objective of the 2004 General Plan includes acquisition and development of regional parks. Opportunities to establish major regional parks may be combined with conservation of major oak woodlands. A new Master Plan for Parks and Recreation should be started in 2007. This new plan should identify the needs and possibly some locations for regional parks.The Department of Parks and Trails is currently charged with managing the portion of the Sacramento-Placerville Transportation Corridor (SPTC) that is within the County. The SPTC was purchased by El Dorado County, the County of Sacramento, the Sacramento Regional Transit District, and the City of Folsom under a joint powers agreement in 1996. This agreement covers a 53-mile corridor of the old Southern Pacific Railroad and stretches from 65th Street in Sacramento to approximately Ray Lawyer Drive/Forni Road in Placerville. Twenty-eight miles of the corridor within El Dorado County ranges in width from 66 feet to 200 feet. Along the corridor are excellent examples of oak types in the County. This corridor offers a great core area that could be widened to 500 feet as feasible and expanded to enhance oak woodland conservation and also help meet the critical needs for regional parks. The Department also manages three parks (Bradford Park in Shingle Springs, Henningsen Lotus Park in Lotus, Pioneer Park in Somerset, and Forebay Park in Pollock Pines), two trails (Rubicon Trail and El Dorado Trail), and the South Fork of the American River below Chili Bar Dam.

15. El Dorado County Department of Long Range Planning
https://www.edcgov.us/LongRangePlanning/

The Department of Long Range Planning manages the General Plan Circulation Element and is responsible of coordinating the planning and implementation of roadway improvement to ensure safe movement of people and goods and to maintain adequate levels of services. The Department

of Long Range Planning carries the responsibility of carrying out well-informed planning while informing the public, facilitating Board-adopted plan, ordinances, and policies, and ensuring that impartial analysis is conducted to meet the needs of the community.

16. Sierra Nevada Conservancy*
    http://www.sierranevadaconservancy.ca.gov/

The Sierra Nevada Conservancy (SNC) was established as a new State agency in 2004 to initiate, encourage, and support efforts that improve the environmental, economic, and social well-being of the Sierra Nevada Region, its communities, and the citizens of California (PRC Sections 333000 et. Seq.). Proposition 84, the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coast Protection Bond Act of 2006, includes $54 million for the SNC to distribute to eligible organizations for the protection and restoration of rivers, lakes and streams, their watersheds and associated land, water, and other natural resources. The SNC offers grants for acquisition and/or site improvement/restoration projects under two programs, the Competitive Grant program and the Strategic Opportunity Grant (SOG) program.

11.2 Public Utility Partners

1. El Dorado Irrigation District (EID)*

   http://www.eid.org

EID has expressed interest in participating with the County as a partner in oak woodland conservation. EID has several small parcels through the planning area that could help in the perpetuation of oaks. EID also has lands along Weber Creek (roughly between Big Cut Road and Cedar Ravine or "Texas Hill") that has potential for water storage in the future. The Texas Hill properties contain large expanses of oaks. Potential partnering between EID and the County could meet EID's water storage needs and oak conservation goals.

2. Georgetown Divide Public Utility District

Currently no opportunities for partnerships have been identified.

3. Sacramento Municipal Utility District (SMUD)
   http://www.smud.org/

In 2006, SMUD and El Dorado County reached an agreement on the Upper American River Project (UARP). The South Fork of the American River is the key component of the UARP. In addition, SMUD has reached agreements with the County, Federal and State agencies, and private interests regarding the operation of the UARP. Details of the agreements are still being developed, but opportunities may exist for conserving or enhancing oak woodlands.

4. Pacific Gas and Electric (PG&E)
   http://www.pge.com/

Currently no opportunities for partnerships have been identified.

11.3 Private Partners

The General Plan anticipates citizen involvement in the development and implementation of the ORMP. Section 10 (Education and Outreach) discusses public involvement in the ORMP's preparation to date. Public participation will continue to be encouraged at the County Planning Commission, Agricultural Commission, and Board of Supervisors' workshops and hearings as the plan is finalized for adoption. Currently, no opportunities for specific partnerships have been identified, but opportunities exist for private acquisition and management of oak resources. Oak nurseries and management of oak woodlands within planned communities are examples. In addition, it is expected that advisory committees will be established as needed.

The El Dorado County Association of Realtors might be a starting point for exploring opportunities and mechanisms to establish a privately managed clearinghouse of landowners potentially interested in selling conservation easements to others (public and private) seeking oak woodland mitigation or conservation lands. Similar to other environmental programs (e.g., air quality trading credits), oak woodlands within the PCAs could be categorically organized and offered on the open market as opportunities for oak woodland mitigation or other conservation programs.

11.4 Non-profit Partners

The implementation of the ORMP will require land use easements. Section 9 (Administration of the Oak Woodland Conservation Program) identifies potential roles of non-profit organizations. Land trusts and conservancies are expected to play key roles in assisting the County with the goals, objectives, and implementation of various components of the ORMP.

12.0 Consistency with the General Plan and State Law

This ORMP fulfills 2004 General Plan Measure CO-P, and as such replaces the Policy 7.4.4.4 Interim Interpretative Guidelines. The ORMP outline the County's strategy for oak woodland conservation and functions as the oak resources component of the County's biological resources mitigation program, identified in General Plan Policy 7.4.2.8.

12.1 ORMP as the Oak Resources Component of the County's Biological Resources Mitigation Program

Preparation of this ORMP has been coordinated with biological resources policy updates The ORMP:

- Includes inventory and mapping of oak woodland resources throughout the County (Figure A-1);
- Inventories and identifies large expanses of native oak woodland vegetation as Priority Conservation Areas (PCAs);
- Concentrates conservation efforts on PCAs that connect to one another or to existing protected (state and federal) lands through a system of regulatory constraints, such as the IBC overlay, riparian corridors, or open space/natural resource lands;
- Describes a strategy for protecting contiguous blocks of PCAs through coordinated acquisition of conservation easements and management of acquired lands;
- Provides standards for conservation of oak woodlands outside of PCAs;
- Provides for a framework for mitigating impacts to oak resources, provides flexibility to allow combinations of mitigation options, and retains consistency with PRC 21083.4;
- Will identify habitat acquisition opportunities involving willing sellers through the education and outreach program, and through partnering with other organizations;
- Identifies alternatives for management of lands acquired and for restoration activities on those lands, where appropriate;
- Incorporates a monitoring program for lands acquired through this ORMP;
- Establishes reporting requirements for replacement tree planting as well as the progress of county-wide oak woodlands conservation;
- Was developed with significant opportunities for public participation throughout the process; and
- Will ensure a source of funding to the County's conservation fund for impacts to oaks and oak woodlands resulting from implementation of the 2004 General Plan.

12.2 Consistency with Measure CO-P

The ORMP partially satisfies the requirements of Measure CO-P, which provides for the development of an Oak Resources Management Plan.

12.3 Compliance with Fish & Game Code Section 1366(a)

The Oak Resources Management Plan is adopted pursuant to the requirements of California Fish and Game Section 1366(a). The ORMP, together with applicable General Plan policies, meets or exceeds the requirements of state law relative to conservation of oaks and oak woodlands.

12.4 Compliance with PRC 21083.4

The ORMP, together with applicable General Plan policies, meets or exceeds the requirements of state law PRC 21083.4 relative to conservation of oaks and oak woodlands.

12.5 Effect of Future Amendments to General Plan

Nothing contained in this Oak Resources Management Plan would preclude an amendment to the County's General Plan, however future General Plan amendments may require a modification of this ORMP.

13.0 List of Preparers

This Oak Resources Management Plan (ORMP) is an updated version of the Oak Woodland Management Plan adopted by the El Dorado County Board of Supervisors on May 6, 2008 (El Dorado County 2008). It incorporates more recent oak resources mapping data for the County and reflects policy language changes made during the General Plan Biological Policy Review project conducted in 2015. This ORMP incorporates relevant information included in the 2008 Plan (prepared by EN2 Resources, Inc., Pacific Municipal Consultants, Inc., and TCW Economics, in coordination with County staff), where applicable, and was prepared in coordination with El Dorado County Community Development Agency, Long Range Planning Division staff. It also incorporates public input gathered during project-focused hearings and direction given by the El Dorado County Board of Supervisors.

County staff involved in preparation of this ORMP includes:

Anne Novotny, Principal Planner, El Dorado County Community Development Services Department

Shawna Purvines, Principal Planner, El Dorado County Community Development Agency

Dave Defanti, Assistant Director, El Dorado County Community Development Agency

Roger Trout, Director, El Dorado County Community Development Services Department

The Dudek consultant team involved in preparation of this ORMP includes:

Cathy Spence-Wells, Principal (Dudek)

Scott Eckardt, Registered Professional Forester/Certified Arborist (Dudek)

Katherine Waugh, Senior Planner (Dudek)

Sherri Miller, Principal Biologist (Dudek)

Mark McGinnis, GIS Manager (Dudek)

Isabel Domeyko, Managing Member (New Economics & Advisory)

14.0 Acronyms

AL	Agricultural Lands
AP	Adopted Plan
BLM	Bureau of Land Management
BOP	Blue Oak-Foothill Pine
BOW	Blue Oak Woodland
C	Commercial
CAL FIRE	California Department of Forestry and Fire Protection
CALVEG	Classification and Assessment with Landsat of Visible Ecological Groupings
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFIP	California Forest Improvement Program
CNDDB	California Natural Diversity Database
CR	Community Regions
CRLF	California red-legged frog
CWHR	California Wildlife Habitat Relationship
DBH	Diameter at Breast Height
DEIR	Draft Environmental Impact Report
EID	El Dorado Irrigation District
EIR	Environmental Impact Report
ENF	Eldorado National Forest
FLP	Forest Legacy Program
FRAP	Fire and Resource Assessment Program
GIS	Geographic Information System
HDR	High Density Residential
I	Industrial
IBC	Important Biological Corridor
ISA	International Society of Arboriculture
LDR	Low Density Residential
MDR	Medium Density Residential
MFR	Multifamily Residential
MHC	Montane Hardwood-Conifer
MHW	Montane Hardwood
NR	Natural Resources
NRCS	Natural Resources Conservation Service
OS	Open Space
ORMP	Oak Resources Management Plan
PCA	Priority Conservation Area
PF	Public Facility
PG&E	Pacific Gas and Electric
PRC	Public Resources Code
RC	Rural Centers

RCD	Resource Conservation District
RD	Research and Development
RMP	Resource Management Plan
RPF	Registered Professional Forester
RPZ	Root Protection Zone
RR	Rural Residential
SMC	Sierran Mixed Conifer
SNC	Sierra Nevada Conservancy
SMUD	Sacramento Municipal Utility District
SPTC	Sacramento-Placerville Transportation Corridor
TR	Tourist Recreational
UARP	Upper American River Project
UCCE	University of California Cooperative Extension
USDA	United States Department of Agriculture
USDI	United States Department of the Interior
USFS	USDA Forest Service
VMP	Vegetation Management Plan
VOW	Valley Oak Woodland
VRI	Valley-Foothill Riparian
WCB	Wildlife Conservation Board
WHR	Wildlife Habitat Relationship

Appendix B

El Dorado County Oak Resources In-Lieu Fees Nexus Study

NEW ECONOMICS & ADVISORY®

LAND USE ANALYSIS & STRATEGIES

El Dorado County Oak Resources In-Lieu Fees Nexus Study

Prepared by New Economics & Advisory

Updated June 2016

Office: (916) 538-9857 | www.new-econ.net | 951 Reserve Drive, Suite 120, Roseville, CA 95678

1. Introduction

This Oak Resources Nexus Study (Nexus Study) has been prepared for El Dorado County (County) pursuant to the "Mitigation Fee Act" found in California Government Code 66000. The purpose of this Nexus Study is to establish the legal and policy basis to allow the County to offer two in-lieu fee options for new development within the County to mitigate impacts to these Oak Resources: Oak Woodland Areas (OWAs) and Individual Oak Trees (IOTs), (which include Heritage Oak Trees and Native Oak Trees). The In-Lieu Fees would provide one mitigation option for projects that impact Oak Resources; other mitigation options include replacement tree planting on- or off-site or conserving existing oak woodlands off-site, as described in the 2016 Oak Resources Management Plan (ORMP).

Oak Resources Conservation Strategy Background

The County's 2004 General Plan Environmental Impact Report identified substantial fragmentation and/or elimination of Oak Resources by residential and commercial development that would occur as a result of new development in El Dorado County[1]. The projected growth in the County increases the potential for significant oak woodland loss.

In 2008 the County prepared an Oak Woodland Management Plan (OWMP), which outlined the County's strategy for conservation of oak woodland areas. The in-lieu oak woodland mitigation fee was intended to be consistent with a future conservation fund to be established under the Integrated Natural Resources Management Plan (INRMP). The fee was established through an economic analysis that was presented to the Board in April 2008. However, a lawsuit challenging the County's approval of the OWMP and its implementing ordinance (Oak Tree Replacement Ordinance) ultimately resulted in the Board's rescission of the OWMP and its implementing ordinance in September 2012. At the same time, the County decided to update biological resources policies in the General Plan. As part of that update, an ORMP based on Board direction has been prepared, including a mitigation fee program for impacts to oak woodlands and individual oak trees. This 2016 Nexus Study reflects the parameters described in the ORMP prepared by Dudek in June 2016 and the Oak Resources Conservation Ordinance and has been prepared to support the in-lieu fee mitigation program component of the ORMP and its implementing ordinance.

The ORMP and its implementing ordinance also define mitigation requirements and options for impacts to Oak Resources, which include OWAs and IOTs. IOTs include individual Native Oak Trees and Heritage Trees.

[1] As cited in the Oak Resources Management Plan prepared by Dudek, June 2016, page 1.

Overview of 2008 In-Lieu Mitigation Fee

An in-lieu mitigation fee was originally developed concurrently with the 2008 OWMP. Calculation of the 2008 in-lieu fee utilized a Level of Service (LOS) methodology, as opposed to a Capital Improvement Program (CIP) methodology, as the basis for its technical approach. While a CIP approach relies on a fixed set of improvements—in this case a known number of acres that can be acquired for a known cost— the LOS approach relies on a service target or standard—in this case a mitigation ratio and mitigation cost per acre. The 2008 analysis relied on the OWMP standard of conserving existing oak canopy of equal or greater biological value as those lost at a conservation mitigation ratio of 2:1[2].

The 2008 analysis developed a per-acre cost for three broad oak woodland conservation activities: acquisition, management, and monitoring. The study estimated cost assumptions for each activity based on a variety of sources, and then applied these assumptions to a hypothetical conservation easement of approximately 125 acres in size. This parcel size was selected because it reflected the average parcel size within Priority Conservation Areas (PCAs)[3].

The OWMP in-lieu fee study established a total cost of $4,700 per acre of canopy impact to fund the acquisition, management, and ongoing monitoring of oak woodland. Based on the 2:1 mitigation ratio, the 2008 OWMP In-Lieu Fee was established at a rate of $9,400 per acre. **Figure 1.1** provides a summary of the cost and fee per acre.

[2] El Dorado County Oak Woodland Management Plan, April 2, 2008, page 9.

[3] Areas where oak woodland conservation efforts may be focused. The ORMP contains a map showing the location of PCAs.

List of Acronyms

ARC	American River Conservancy
CAL FIRE	California Department of Forestry and Fire Protection
CE	Conservation Easement
CEQA	California Environmental Quality Act
CIP	Capital Improvement Project
CPUC	California Public Utilities Commission
FRAP	Fire and Resource Assessment Program
GIS	Geographic Information Systems
HRS	Habitat Restoration Sciences, Inc.
Initial M&M	Initial Management and Monitoring
INRMP	Integrated Natural Resources Management Plan
IOT	Individual Oak Tree
LCO	Land Conservation Organization
Long-Term M&M	Long-Term Management and Monitoring
LOS	Level of Service
NACUBO	National Association of College and University Business Officers
ORMP	Oak Resources Management Plan
ORTR	Oak Resources Technical Report
OWA	Oak Woodland Area
OWMP	Oak Woodland Management Plan
PCA	Priority Conservation Area
PCCP	Placer County Conservation Plan
PLT	Placer Land Trust
PRC	California Public Resources Code
SACOG	Sacramento Area Council of Governments
SF	Sempervirens Fund
SFC	Sierra Foothill Conservancy
SRAS	State Responsibility Areas
SRL	Save the Redwoods League
STF	Sacramento Tree Foundation
SVC	Sacramento Valley Conservancy
TAZ	Transportation Area Zones

Table of Contents

List of Acronyms 1

1. Introduction 4
   - Oak Resources Conservation Strategy Background 4
   - Overview of 2008 In-Lieu Mitigation Fee 5
   - New Proposed Fee: Purpose, Approach, and Amount 6
   - Administration and Implementation 10
   - Documents Consulted for the Preparation of This Report 10
   - Overview of Methodology 11
   - Organization of this Nexus Study 11

2. Fee Program Boundary, Eligibility, & Standards 12
   - Fee Program Boundaries 12
   - New Development Eligible for In-Lieu Fee Option 13
   - Oak Resources Mitigation Standards 13

3. Cost to Conserve OWAs 15
   - Oak Woodland Areas Overview 15
   - Approach to Estimating Costs 15
   - Conservation Activities Overview 16
   - Acquisition (Year 0) 19
   - Management & Monitoring (M&M) 25
   - Total Costs 31

4. Nexus, Fee Calculation, & Fee Act Findings – OWA In-Lieu Fee 33
   - Nexus Requirements 33
   - Fee Calculation 35

5. Cost to Replace IOTs 38
   - Conservation Overview 38
   - Acquisition and Planting (Year 0) 39
   - Initial M&M (Years 1-7) 40
   - Administration 41
   - Total Costs 42

6. Nexus, Fee Calculation, and Fee Act Findings – In Lieu Individual Oak Tree Fee 43
   - Nexus Requirements 43
   - Fee Calculation 45

7. Implementation & Administration 48
Adoption and Authorization 48
Establishment of Fees 48
Timing of Collection of Fees 48
Exemptions 49
Fee Rate Reductions for Affordable Housing Projects 50
Administration and Administrative Fee 51
Annual Inflation Adjustment 51
Annual Findings/Accounting 53
Refund of Unexpended Revenues 53
Reallocation of Remaining Revenue 54
Other Periodic Reviews and 5-Year Updates 54

Appendix A: Supporting Calculations for OWA Conservation 55
Appendix B: Supporting Calculations for Endowment Fee Component 74
Appendix C: Bibliography 78

1.1 2008 OWMP In-Lieu Mitigation Fee Rate
2008$

Activity	Amount Per Acre
Cost Components	
Acquisition [1]	$2,300
Management [2]	$1,200
Monitoring [3]	$1,200
Total Cost Per Acre	$4,700
Mitigation Ratio For In-Lieu Fee	2:1
Proposed Fee per Acre	**$9,400**

Prepared by New Economics & Advisory, June 2016.

[1] Conservation easement on rural land acquisition of 125 acres, which is the average parcel size within the PCAs. Acquisition costs include the easement land value (approximately $1,800, or 40% discount value) and conveyance costs.

[2] Includes biological survey/ baseline documentation, weed control, and fuels treatment.

[3] Includes endowment for on-going monitoring.

Source: El Dorado County Oak Woodland Management Plan, April 2, 2008, Page 10, Table 4.

The 2008 analysis did not include an in-lieu fee for individual Heritage Trees or Oak Trees.

As described previously, the 2008 OWMP In-Lieu Fee was only in effect for a limited time because the OWMP itself was the subject of litigation. The County has prepared an ORMP reflecting a number of policy changes directed by the County Board of Supervisors. This Nexus Study has been prepared to update the assumptions and costs in support of the in-lieu fee mitigation component of the ORMP.

New Proposed Fee: Purpose, Approach, and Amount

Purpose of the Nexus Study and Fee

The purpose of the 2016 El Dorado County Oak Resources Nexus Study is to determine in-lieu fee rates for mitigating impacts to eligible Oak Resources, including OWAs, and IOTs.

This Nexus Study proposes a fee designed to pay the full cost of the mitigation for development impacts, including Acquisition, Initial Management & Monitoring (Initial M&M), Long-Term Management & Monitoring (Long-Term M&M), and associated Administrative functions.

Nexus Study Approach

Typically one of two methodologies is utilized to prepare a nexus study: a CIP approach and a LOS approach. The CIP approach relies on a known amount of improvements that must be funded by the fee program and a known amount of new development that will participate in the fee program. The CIP approach is appropriate when the improvements and scale of new development is known. The LOS approach relies on an established level of service or performance measure (such as a required amount of library space per resident) and is used in cases where the amount of development is not certain. For this study, the levels of service evaluated are the mitigation ratios identified in the ORMP.

This 2016 Nexus Study is an update to the 2008 in-lieu mitigation fee study and continues to utilize a LOS methodology. LOS standards for Oak Resources mitigation, developed in the ORMP, are summarized in **Figure 1.2**. This 2016 Nexus Study also notes that the LOS approach remains preferable because the amount of OWAs and IOTs ultimately conserved by one or more Oak Resources Land Conservation Organization(s) (LCOs) with funds from Oak Resources In-Lieu Fees cannot be reasonably predicted at this time, for the following reasons:

- Impacts to Individual Oak Trees could occur as a result of improvements constructed on property that is already developed, unrelated to new development proposals; the County has no projections for the potential scale at which improvements to existing developed property may occur.
- The amount of impacts to Oak Resources as a result of new development is uncertain because it is not known to what extent land-use plans would avoid and/or lessen impacts to existing Oak Resources.
- For new projects that do impact Oak Resources, the mitigation requirement will depend on the percentage of woodland impact.
- The ORMP provides three options to mitigate impacts to Oak Resources. Developers can choose one of the three options to meet their mitigation requirements. The Oak Resources In-Lieu Fees represent one of the three options. It is not known in what proportion each option will be selected; therefore it is not known how much land would be conserved under the in-lieu fees.

Certain development activities are exempted from mitigation requirements, including small parcels that cannot be further subdivided, agricultural activities, creating defensible space/undertaking fire safe measures, qualified affordable housing projects, and certain public roads and public utility projects. **Section 7** of this Nexus Study describes these exemptions in more detail.

1.2 *Standards for Oak Woodland Resources 2016 ORMP*

Standard	Oak Woodland Areas (OWAs)	Individual Oak Trees (IOTs)	
		Heritage Oak Trees	Native Oak Trees
Definition	Oak stand that contains greater than ten percent canopy cover. [1]	Native oak trees, outside of Oak Woodland Areas, with a single main trunk measuring measuring 36 dbh or greater, or with a multiple trunk with an aggregate trunk diameter measuring 36 inches or greater.	Individual oak tree, outside of Oak Woodland Areas, with a single main trunk measuring greater than 6 but less than 36 inches dbh, or with a multiple trunk with an aggregate trunk diameter measuring greater than 10 but less than 36 inches dbh.
Mitigation Ratio	00.1-50.0% of Oak Woodland Impact = 1:1 Ratio 50.1-75.0% of Oak Woodland Impact = 1.5:1 Ratio 75.1-100% of Oak Woodland Impact = 2:1 Ratio	Inch-for-inch replacement at a 3:1 ratio	Inch-for-inch replacement at a 1:1 ratio
Mitigation Obligations	Conservation, Tree Planting, Management & Monitoring	Conservation, Tree Planting, Management & Monitoring	Conservation, Tree Planting, Management & Monitoring
Duration of Conservation	Perpetuity	Seven (7) years	Seven (7) years

[1] The definition of OWAs also includes an oak stand that "may have historically contained greater than ten percent canopy cover," per Article 3.5 (commencing with Section 1360) of Chapter 4 of Division 2 of the Fish and Game Code. However, page 3 of the ORMP clarifies that ORMP conservation efforts focus on existing woodlands.

Prepared by New Economics & Advisory, June 2016.

Source: ORMP, June 2016.

For oak woodland impacts that do not fall under an exemption category, mitigation options include on- or offsite tree planting, offsite conservation, and/or in-lieu fee payment. For IOT impacts (including Heritage Oak Trees and Native Oak Trees) that are not otherwise exempt, mitigation options include on- or offsite tree planting and/or in-lieu fee payment. This Nexus Study provides the justification for the in-lieu fee rate for each Oak Resource.

As described previously, the 2008 in-lieu mitigation fee study applied a series of cost estimate assumptions to a hypothetical 125-acre parcel to develop a per-acre fee. In contrast, this 2016 Nexus Study considers actual recent and/or current acquisition and management and monitoring costs faced by LCOs actively conserving oak woodland resources or other tree-dominated habitat. **Section 3** of this Nexus Study provides a complete list of existing LCOs actively acquiring and managing land for the purpose of conserving trees that were studied for purposes of identifying a range of costs. Data was sought for three major conservation activity categories: Acquisition, Initial M&M, and Long-Term M&M. Once the cost ranges were established and reviewed, New Economics & Advisory, in consultation with County staff, determined that costs incurred by Placer Land Trust (PLT), American River Conservancy (ARC), and planning efforts

related to the Placer County Conservation Plan (PCCP) should be prioritized because these organizations/studies provided data specific to oak woodland areas *and* operate primarily within El Dorado County or Placer County; therefore, their data represent the most accurate information pertaining to acquisition as well as management and monitoring costs. Moreover, compared to other adjacent counties (Sacramento County and/or Amador County), the attributes of Placer County's Oak Resources and development patterns are more similar to those of El Dorado County.

Costs incurred by these select LCOs are then averaged. This approach differs from the 2008 in-lieu fee analysis in that this 2016 Nexus Study takes into consideration costs for a variety of locations (rural and urban), terrains (canyon, valley, foothills), and sizes (small, ranch). Based on the recent and/or current costs incurred by these select LCOs, New Economics & Advisory developed an OWA In-Lieu Fee that includes the following components:

- Acquisition (via direct acquisition or conservation easements)
- Initial M&M
- Long-Term M&M
- Fee Program Administration

This 2016 Nexus Study also includes proposed fees for IOTs. Dudek and its subsidiary company, Habitat Restoration Sciences, Inc. (HRS), developed costs for acquisition and planting, as well as seven (7) years of management and monitoring, on a per diameter inch basis. Dudek and HRS researched current purchase prices for 1-gallon oak trees, applied industry standard assumptions for planting costs, and developed a per-acre cost of seven years of management of monitoring for a one-acre re-planting project.

This Nexus Study assumes that the County will administer the Oak Resources In-Lieu Fee program and remit fee revenues to existing or new LCO(s) dedicated to conserving Oak Resources (Oak Resources LCO). The Oak Resources LCO(s) will utilize In-Lieu Fees established herein to acquire and conserve Oak Resources.

Proposed Fee Rate Amounts

Figure 1.3 summarizes the total proposed fee rates for OWAs and IOTs. **Section 3** of this Nexus Study contains the assumptions and analysis supporting each of the OWA rates, while **Section 5** contains the assumptions and analysis supporting each of the IOT rates.

1.3 *Summary of Fee Rates (2016$)*
El Dorado County Oak Woodland Nexus Study

	Oak Woodland Areas (OWAs)			Individual Oak Trees (IOTs)	
Item	0.01 - 50.0% Impact	50.01 - 75.0% Impact	75.01 - 100.0% Impact	Heritage Oak Trees	Native Oak Trees
	per acre			per diameter inch	
Fee Rate	$8,285	$12,428	$16,570	$459	$153

Prepared by New Economics & Advisory, June 2016.

Oak Woodland Area In Lieu Fee (per acre)

The OWA In-Lieu Fee ranges from $8,285 to $16,570 per acre, depending on the mitigation ratio level. This rate funds the cost of land acquisition, Initial M&M (years 1-5), and Long-Term M&M (years 6-perpetuity).

Individual Oak Tree In Lieu Fee (per diameter inch)

The IOT In-Lieu Fee is $459 per diameter inch for Heritage Oak Trees and $153 per diameter inch for Native Oak Trees. This amount funds the cost of tree acquisition and planting as well as Initial M&M (years 1-7). This Nexus Study presumes that Long-Term M&M costs will be nominal and can be covered by the Oak Resources LCO(s) through maintenance of OWAs.

Administration and Implementation

As stated previously, it is anticipated that the County will collect in-lieu fees and transfer them to one or more Oak Resources LCOs, which will be in charge of acquiring, managing, and monitoring conservation areas and tree planting efforts funded by the in-lieu fees. The proposed fee rates identified above also include a 5 percent administration cost component for County staff to calculate fee obligations, collect fee revenues, transfer revenues to the entity managing conservation efforts, implement annual inflation updates, and periodically update the Nexus Study.

Documents Consulted for the Preparation of This Report

This 2016 Nexus Study references and/or relies upon a number of other documents and interviews with LCOs. **Appendix C** contains a complete list of sources and persons consulted.

Overview of Methodology

The approach utilized to develop the Oak Resources In-Lieu Fees includes the following general steps:

1. Identify the potential scale of new development that may impact existing Oak Resources.
2. For each Oak Resource, define the mitigation requirements and ratio(s).
3. Review the costs associated with mitigation for each Oak Resource. Convert costs to a per-acre basis for OWAs and per diameter inch for IOTs.
4. Establish a fee rate and nexus for each Oak Resource In-Lieu Fee.
5. Review administrative and implementation process for the Oak Resources In-Lieu Fee programs.

Organization of this Nexus Study

The remainder of this Nexus Study is organized in the following manner:

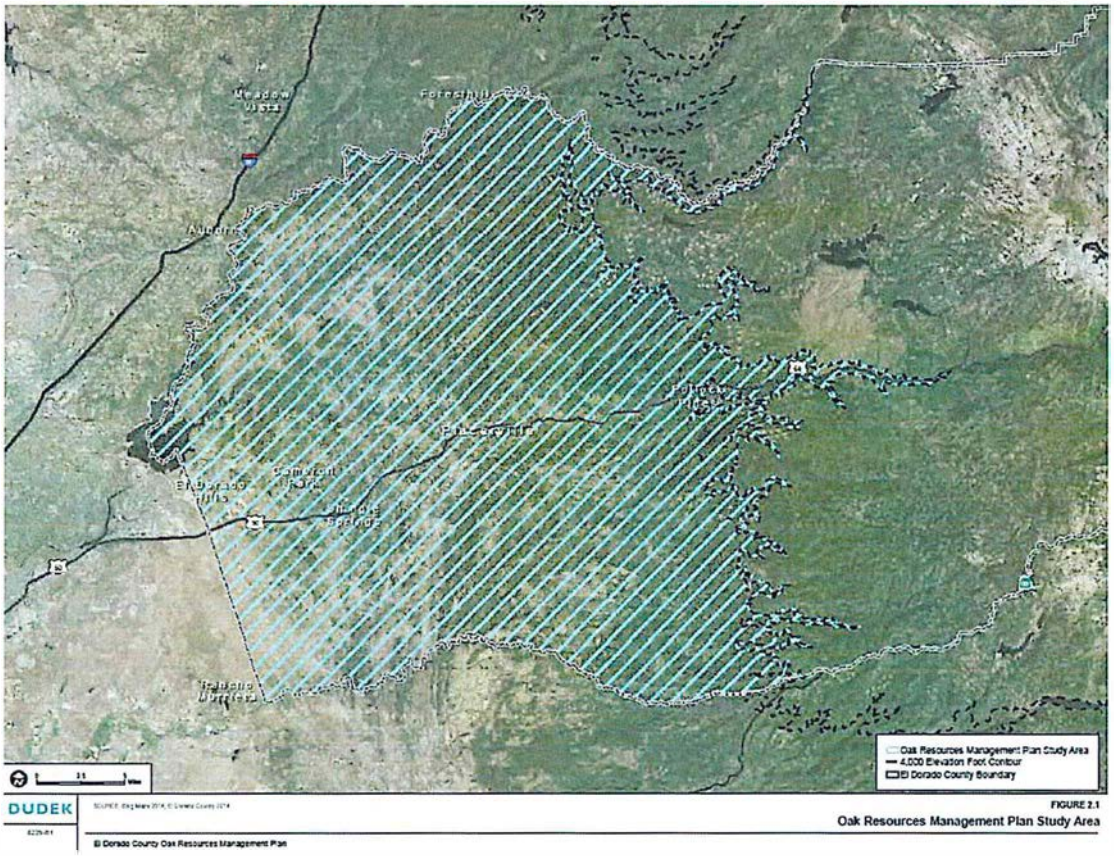
- **Section 2** provides an overview of the boundaries of the Oak Resources In-Lieu Fee program and reviews the type and potential scale of development that may elect to pay the fees.
- **Section 3** describes how oak woodland conservation costs were developed.
- **Section 4** establishes the nexus for the proposed OWA In-Lieu Fee.
- **Section 5** explains the development of individual oak tree replacement costs.
- **Section 6** establishes the nexus for the proposed IOT In-Lieu Fee.
- **Section 7** provides implementation procedures to administer the fee programs.
- **Appendix A** contains supporting calculations for OWA conservation costs.
- **Appendix B** contains supporting calculations for the endowment component of the OWA In-Lieu Fee.
- **Appendix C** contains a bibliography for this Nexus Study.

2. Fee Program Boundary, Eligibility, & Standards

This section provides an overview of the boundaries of the Oak Resources In-Lieu Fee program and reviews the type and potential scale of development that may elect to pay the fees.

Fee Program Boundaries

The boundaries for this Nexus Study are the same as those included in the ORMP, which include the area bordered by the County's administrative boundary to the north, west, and south and ending at the 4,000-foot elevation to the east as shown in **Figure 2.1.** This area contains the same categories of oak woodlands as described in the California Department of Forestry and Fire Protection's (CAL FIRE) Fire and Resource Assessment Program (FRAP) and addressed in the County's 2004 General Plan.



New Development Eligible for In-Lieu Fee Option

Mitigation requirements for impacts to OWAs will apply to any land development project requiring a discretionary entitlement from the County that is subject to review under CEQA and which will have an impact on Oak Resources within the ORMP boundaries. Mitigation requirements for IOTs will apply to any activity requiring a building permit or grading permit issued by El Dorado County and/or any action requiring discretionary development entitlements or approvals from El Dorado County within the ORMP boundaries. **Section 7** of this Nexus Study contains a description of development activities that are exempt from mitigation requirements for Oak Resources. For non-exempt activities, the ORMP provides options for mitigation:

- on- or offsite tree planting[4];
- off-site conservation;
- payment of the In-Lieu Fee; or
- a combination of the above.

The Oak Resources In-Lieu Fees will apply to any eligible, non-exempt development project that chooses to mitigate quantified impacts to Oak Resources by selecting the In-Lieu fee payment option.

Anticipated Growth Through 2035

The projected growth throughout the County is anticipated to impact oak resources. **Figure 2.2** summarizes the scale of development anticipated between 2014 and 2035 within unincorporated areas of the County's Western Slope (the area outside of the Lake Tahoe Basin[5]). This area includes a larger territory than the ORMP boundary but is the closest approximation for purposes of this Nexus Study.

Oak Resources Mitigation Standards

LOS standards for Oak Resources mitigation, developed in the ORMP, are summarized in **Figure 1.2** in **Section 1** of this Nexus Study. For OWAs, the mitigation ratio depends on the percentage of OWAs impacted. For IOTs, mitigation is based on the total tree trunk diameter inches removed.

---

[4] As noted in Section 2.2.2 of the ORMP, replacement planting shall not account for more than 50 percent of the oak woodland mitigation requirement, consistent with California Public Resources Code Section 21083.4..

[5] SACOG tracks data for multiple Transportation Area Zones (TAZs) that comprise the Western Slope; TAZ 13 appears to include a large area between the boundary of the ORMP and the Lake Tahoe Basin.

2.2 *El Dorado County Development Projections 2010-2035*

Category	Units/Jobs 2010	2020	2035	Growth 2010-2035
Housing Units [1]	59,668	66,102	77,077	17,409
Jobs [2]	32,597	38,539	48,675	16,078

Prepared by New Economics & Advisory, June 2016.

[1] From BAE 2035 Growth Projections Memorandum, Table 2: Projected Residential Growth Rates, 2010 to 2035. (Full report citation below). Projection based on historical average annual rate of new units (2000-2011).

[2] From BAE 2035 Growth Projections Memorandum, BAE Memorandum, Table 5: Projected New Jobs by Market Area, 2010-2035. (Full report citation below).

Source: BAE Urban Economics, 2035 Growth Projections Memorandum, March 14, 2013.

3. Costs to Conserve OWAs

New development that impacts existing OWAs will have three options to mitigate impacts: plant replacement trees on- or offsite, conserve oak woodlands off-site, and/or pay an In-Lieu Fee. This section of the Nexus Study describes the costs associated with mitigation through an In-Lieu OWA Fee.

Oak Woodland Areas Overview

Figure 3.1 provides a summary of the different types of Oak Woodland and the number of acres that currently exist in the ORMP Study Area (including within the PCAs).

3.1 ***Oak Woodland Types***
El Dorado County, 2016

Oak Woodland Type	ORMP Boundary Total (acres)	Percent
Blue Oak Woodland	46,521	18.9%
Blue Oak-Foothill Pine	64,740	26.2%
Coastal Oak Woodland	2	<0.1%
Montane Hardwood	98,930	40.1%
Montane Hardwood-Conifer	32,643	13.2%
Valley Oak Woodland	3,970	1.6%
Total	**246,806**	**100%**

Source: California Department of Forestry and Fire Protection (CAL FIRE) California Fire and Resource Assessment Program (FRAP) 2015.

Impacts to OWAs

As discussed in **Section 5** of the ORMP, the number of OWA acres impacted by a project, if any, will be identified in an Oak Resources Technical Report (ORTP) prepared by a qualified professional hired by the project applicant. Should it be determined that OWAs will be impacted, the development project will be subject to the mitigation ratios shown in **Figure 1.2** in **Section 1** of this Nexus Study.

Approach to Estimating Costs

As explained in **Section 1**, this Nexus Study considers actual recent and/or current acquisition and M&M costs faced by LCOs actively conserving oak woodland resources or other tree-dominated habitat. **Figure 3.2** lists these organizations and provides an

indication of the geographic territory they serve, their structure, the type of habitat conserved, and their primary conservation role(s).

These organizations were selected because of their focus on conserving woodland habitat or other tree-dominated habitat. **Figure 3.3** provides an overview of the scale of habitat protected by these LCOs, how this habitat has been protected (via direct acquisition or conservation easement), and the scale of habitat actively managed by each organization. Because some organizations protect a variety of habitat land, (e.g. vernal pools, riparian corridors), acreage shown in this figure includes *all* land protected by the organization, not merely land protected for purposes of conserving woodland habitat.

For each of these LCOs, New Economics & Advisory collected data regarding recent land acquisitions, (including the cost and method), as well as annual management and monitoring costs. These costs were then translated into a "per-acre" basis. Data was gathered from each LCO's website, publicly available financial statements, and/or consultation with LCO staff. **Appendix A** contains the detailed technical research supporting financial calculations for each of the LCOs.

Conservation Activities Overview

This 2016 Nexus Study identifies three stages of conservation:

1. **Acquisition.** This first stage includes due diligence, planning for management and monitoring, and the actual land acquisition transaction.
2. **Initial M&M.** According to interviews with LCO staff, this second stage of conservation typically lasts up to 5 years and includes baseline documentation, fuel management, clearing of debris, establishment of fencing, active monitoring to ensure that OWAs or IOTs are maintained, etc.
3. **Long-Term M&M.** This third stage of conservation is the least onerous and involves periodic fuels management, invasive species management, and repairs on an as-needed basis.

Figure 3.4 provides examples of conservation activities during each of these stages.

3.4 *Typical Conservation Activities-- OWAs*
Acquisition, Management, and Monitoring

Acquisition	Initial M&M [1]	Long-Term M&M
Conservation Easement Acquisition	Biological Surveys/Baseline Documentation	License/Contract Agreement Mgmt.
Direct Property Acquisition	Fuel Load Mgmt.	Fuel Load Mgmt.
Legal Document Prep. & Review	Equipment & Materials Mgmt.	Volunteer Training/Coordination
Site Inspection	Database Mgmt./Reporting	Office Equipment/Computers Maint./Upgrades
Aerial Photos	Photo-Documentation	Endowment Mgmt.
Appraisals	Manage/Transition Cattle/Grazing Leases	Aerial Photos
Due Diligence Surveys/Analyses	Monitoring & Adaptive Management:	Administration/Overhead
Mitigation/CE Negotiations	Reforesting	Infrastructure/Property Maintenance:
	Exotic Species/Plant Removal	Debris/Trash Mgmt.
	Building Removal/Maint.	Weed Control
	Invasive Vegetation/Thatch Mgmt.	Cattle Grazing Monitoring & Mgmt.
	Invasive Species Mgmt.	Water Systems Maint.
		Fence Building & Repairs
		Trail Building & Maintenance
		Erosion/Road Repair & Improvements
		Recreation Use Enhancements

Prepared by New Economics & Advisory, June 2016.
[1] Some Initial M&M tasks are carried over to long-term management and monitoring with less intensity.
Sources: California Council of Land Trust website accessed May 2015; Land Trust Alliance website, accessed May 2015; New Economics internet research, interviews; and land conservation organization feedback, April-June 2015.

Acquisition (Year 0)

Acquisition of OWAs are expected to take one of two forms:

- **Direct Acquisition**. This Nexus Study presumes that the Oak Resources LCO(s) will hold fee title to property conserved through direct acquisition (instead of passing it along to another public agency or non-profit entity). This Nexus Study also assumes that properties conserved via direct acquisition will also be actively managed by the LCO. This assumption is consistent with current practices for many of the LCOs tracked in this analysis.
- **Acquisition of Conservation Easements (CEs)**. Properties protected through the purchase of CE's are expected to remain under the ownership of private landowners holding fee title to such properties. LCO interviews indicated that land protected through CEs is, in some cases, managed by the landowners but nearly always monitored (for compliance purposes) by the LCO. In other cases, the landowner and LCO enter into an M&M contract that specifies the range and cost of M&M services to be provided by the LCO. This 2016 Nexus Study presumes that OWAs protected through CE's will be subject to an active M&M contract between the land owner and Oak Resources LCO and that the LCO will provide the same level of M&M as land owned by the Oak Resources LCO.

In addition to the purchase price for acquisition of property or CE's, other costs included in this category include legal services, appraisals, due diligence, title insurance and escrow fees, and organizational staff time associated with acquisition efforts.

Direct Acquisition Costs

Figure 3.5 contains a summary of direct property acquisition cost trends for LCOs on a per-acre basis. These per-acre figures reflect acquisitions expressly made for purposes of conservation, predominantly within the last five years, and reflect nominal dollars.[6] **Appendix A** contains supporting acquisition information for each LCO, including the purchase price, other acquisition-related costs, and the size of the property. In some cases, LCO staff was able to articulate trends as well as specific transaction details. Recent conservation land costs among LCOs range from $1,000 to nearly $17,000 per acre, but most fall within a range of $2,800 to $12,000 per acre.

New Economics & Advisory then further reviewed per-acre costs incurred within El Dorado County and Placer County, given that these areas provide the most proximate approximations of cost likely to be incurred by one or more Oak Resources LCOs conserving OWAs with funds from Oak Resources In-Lieu Fees.[7] **Figure 3.5** lists data points from the following entities:

- **El Dorado County Assessor's Office.** The Assessor's Office provided a list of land transactions over the last five years for properties that contain OWAs. Of the information provided (see **Appendix A Table A1**), one transaction stood out as a viable comparable because a significant portion of the property contained OWA. This transaction, which dates back to 2012, is included in **Figure 3.5**. The other transactions contained relatively little OWA and their prices per acre reflect their "development" value, as opposed to their potential OWA value.
- **ARC.** ARC provided three direct acquisition transactions as well as a per-acre estimate that staff utilizes for planning purposes. These transactions varied in size from 1,000 to 10,000 acres. Because ARC is about to complete an unusually large land purchase, New Economics & Advisory applied a direct average approach when deriving a per-acre cost for this organization (shown- in **Appendix A Table A2.1**).
- **PLT.** PLT provided two direct acquisition transactions for land containing OWAs; these transactions varied in size from 80 acres to nearly 1,800 acres and costs include purchase price, legal fees, appraisal, title insurance and escrow fees, and staff and administrative time. **Appendix A Table A3.1** contains the detailed documentation of these transactions. Staff also provided their input on current per-acre market prices for oak woodland in different terrains within Placer County.

---

[6] Real estate transactions are not converted to a single year (i.e. 2016$) owing to varying market conditions over time and by market area. As a result, all transactions are shown in nominal dollars—or the cost incurred in the year they were incurred—and are not inflated to 2016$.

[7] For example, Save the Redwoods League (SRL) makes the bulk of its acquisitions along the California Coast for properties that contain redwood groves; coastal values tend to be significantly high compared to Central Valley values.

Data points developed from these three sources provides a narrower range of $2,000 - $12,000, with most points falling between $3,000 and $6,000. New Economics & Advisory selected a direct acquisition price of $5,000 per acre for purposes of this 2016 Nexus Study; this amount falls within the range of prices experienced and/or anticipated by the organizations actively conserving OWAs within closest proximity to El Dorado County and is aligned with the expertise of organizational staff. The selected price is also higher than the mid-point of the range to allow for purchase of non-OWA land included in a parcel that contains the desired amount of OWA acreage.

Conservation Easement Acquisition Costs

CE's tend to provide a more cost effective means of conserving land. **Figure 3.6** provides a summary of recent acquisitions via CE's by LCOs. These per-acre figures reflect CEs entered into expressly for purposes of conservation, predominantly within the last five years. **Appendix A** contains supporting CE information for each LCO, including the purchase price, other acquisition-related costs, and the size of the property. Because CEs are used less often than direct acquisition, there were fewer CE data points; nonetheless, individual easement transactions varied from 26 acres (PLT) to 22,986 (Save the Redwoods League) acres in size. These data points provide a range of $700 - $3,500 per acre.

Interviews with LCO staff revealed the following important caveats regarding valuation of CEs:

- CE's are sometimes chosen over direct acquisition because the subject property has a development restriction already and cannot be developed. For example, a subject property within a larger master planned community may have a vernal pool on it. Other examples of development restrictions can include poor road access, lack of utility connections, steep slope, etc. In these cases, because the property is already prevented or hindered from being developed, the starting appraised value may well be lower than a nearby "comparable" property that can be developed.
- The value for a CE should, theoretically, reflect the value of "development potential," excluding other income potential for the property, primarily associated with grazing and/or timber. LCO staff experienced in appraisals have observed that CE values are often lower than expected by the landowner, which can act as a disincentive to landowners interested in placing a CE on their property. In practice, only properties located in urban areas or areas facing significant development pressures tend to generate enough value for a CE to make financial sense to most landowners.

3.6 Conservation Easement Value Assumption

LCO Case Studies (Nominal Dollars)

Organization	Recent Conservation Easement Purchases: Acres [1]	Recent Conservation Easement Purchases: Cost per Acre
All LCOs		
American River Conservancy (ARC)	1,178	$1,585
Placer Land Trust (PLT)	858	$1,600
Sierra Foothill Conservancy (SFC)	6,948	$700
Sempervirens Fund (SF)	151	$3,477
Save the Redwoods League (SRL)	23,364	$771
Placer County Conservation Plan (PCCP)	N/A	N/A
Sacramento Tree Foundation (STF)	N/A	N/A
Sacramento Valley Conservancy (SVC)	N/A	N/A
LCO Data Applied in this Analysis		
American River Conservancy (ARC)	1,178	$1,585
Placer Land Trust (PLT)	858	$1,600
CE Acquisition Price Applied for this Analysis [2]		**$1,600**

Prepared by New Economics & Advisory, June 2016.
[1] Reflects select recent CE's, based on information provided directly by organizations or taken from their published financial documents.
[2] Figure rounded to nearest hundred dollars. Also, while the data sources reflect figures expressed in nominal dollars over a period of multiple year, this analysis expresses the final figure as a 2016 dollar amount for purposes of calculating a fee rate.
Source: See Technical Appendix A for supporting calculations.

New Economics & Advisory further reviewed per-acre CE costs incurred within El Dorado County and Placer County, given that these areas provide the most proximate approximations of cost likely to be incurred by an Oak Resources LCO conserving OWAs with funds from Oak Resources In-Lieu Fees. **Figure 3.6** lists data points from the following entities:

- **ARC.** ARC provided one recent CE for a 1,200-acre easement. Costs included the purchase price as well as a contribution to an Endowment Fund; the endowment contribution was included in the cost because the purchase price could have been increased without this contribution.
- **PLT.** PLT provided five recent CEs transactions; these transactions varied in size from 26 to 350 acres and costs include purchase price, legal fees, mitigation

contracts, and contributions to a Stewardship Fund. The Stewardship Fund contribution was included in the cost because the purchase price could have been increased without this contribution. **Appendix A Table A3.1** contains the detailed documentation of these transactions. Staff also provided their input on current per-acre market prices for oak woodland in different terrains within Placer County.

Data points developed from these two sources provides an estimate of $1,600 per acre for CE costs. New Economics & Advisory selected this cost for purposes of this 2016 Nexus Study; this amount falls within the range of prices experienced and/or anticipated by the organizations actively conserving OWAs within closest proximity to El Dorado County.

Calculation of Overall Acquisition Cost Per Acre Assumption

The Acquisition Component of the OWA In-Lieu Fee should account for both direct acquisitions and acquisitions via CEs. **Figure 3.7** indicates a range of 7% to 65% of total land acquired through CEs (as opposed to direct acquisition), with a weighted average of 18%. When considering only ARC and PLT, the range is slightly smaller—7% to 52%-- but the weighted average remains 18%. This 2016 Nexus Study applies this same proportionality of direct acquisition versus acquisition via CE's. **Figure 3.7** calculates an Acquisition cost per acre for OWAs based on this proportionality.

3.7 *Weighted Average Acquisition Cost Per Acre*
2016$

Organization	Total Acres Protected	CE's as a % of Total [1]
All LCOs		
American River Conservancy (ARC)	24,984	7%
Placer Land Trust (PLT)	7,766	52%
Placer County Conservation Plan (PCCP)	48,250	N/A
Sierra Foothill Conservancy (SFC)	25,743	65%
Save the Redwoods League (SRL)	200,000	11%
Weighted Average of Land Acquired via CE	[2]	**18%**
LCO Data Applied in this Analysis		
American River Conservancy (ARC)	24,984	7%
Placer Land Trust (PLT)	7,766	52%
Weighted Average of Land Acquired via CE		**18%**
Calculation of Average Acquisition Cost Per Acre		
Average Direct Acquisition Cost Per Acre	$5,000	82%
Average CE Cost Per Acre	$1,600	18%
Weighted Average Acquisition Cost Per Acre [3]	**$4,400**	

Prepared by New Economics & Advisory, June 2016.

[1] Based on total protected land shown in Figure 1.3.

[2] Excludes STF (which does not own or acquire property), SVC (for lack of information), and PCCP (for lack of information).

[3] Figure rounded to nearest hundred dollars.

Source: See Technical Appendix for supporting calculations.

Management & Monitoring (M&M)

The ORMP requires that OWAs be actively managed and maintained in perpetuity. An Initial M&M stage consists of one-time activities (certain one-time tasks that must be performed), as well as specific M&M efforts conducted over the first few years to ensure that the OWAs are brought up to a manageable condition. The Long-Term M&M stage begins when Initial M&M activities come to an end and less intensive M&M activities are needed. **Figure 3.4** provides examples of these activities.

Figure 3.8 summarizes estimated M&M on a per-acre basis for LCOs; costs range from $19 (from planning efforts associated with the Placer County Conservation Plan [PCCP]) to $11,211 (Sacramento Tree Foundation [STF])[8] per managed acre, but tended to fall mostly within a range of $40 to $51 per managed acre.

3.8 *Annual M&M Costs -- Case Study LCOs*
2016$

Organization	Managed Acres	Annual M&M Costs per Acre
All LCOs		
Placer County Conservation Plan (PCCP)	N/A	$18.82
Sempervirens Fund (SF)	10,713	$41.19
Sacramento Valley Conservancy (SVC)	4,062	$39.97
American River Conservancy (ARC)	15,401	$40.00
Placer Land Trust (PLT)	4,825	$51.08
Sierra Foothill Conservancy (SFC)	6,481	$116.06
Save the Redwoods League (SRL)	14,454	$314.96
Sacramento Tree Foundation (STF)	30	$11,211.09
LCO Data Applied in this Analysis		
American River Conservancy (ARC)	15,401	$40.00
Placer Land Trust (PLT)	4,825	$51.08
Weighted Avg M&M Costs		$42.64
Monitoring & Management Applied in Nexus Study [1]		**$43.00**

Prepared by New Economics & Advisory, June 2016.
[1] Figures rounded to the nearest whole dollar.
Source: See Technical Appendix for supporting calculations.

New Economics & Advisory derived these estimates based on recent publicly available financial statements, consultation with organizational staff, and information gleaned from the organization's web site and/or annual reports. M&M costs generally include conservation activities for active M&M as well as a proportionate share of overhead and administrative costs. **Appendix A** contains detailed financial calculations supporting M&M costs for each LCO.

[8] STF's primary mission is to plant trees as opposed to maintaining existing woodland.

New Economics & Advisory further reviewed per-acre CE costs incurred by organizations actively managing OWAs in El Dorado County and/or Placer County, given that these areas provide the most proximate approximations of cost likely to be incurred by an Oak Resources LCO conserving OWAs with funds from Oak Resources In-Lieu Fees. **Figure 3.8** lists data points from the following entities:

- **ARC.** ARC staff provided a verbal estimate of $35-40 per acre to manage oak woodland areas located on ranch-size properties (1,000 acres+); this amount includes 15-20% overhead. Staff also pointed out that annual M&M costs can be more expensive for smaller properties, properties located in urban areas, or properties that provide recreational access. New Economics & Advisory applied the high end of the range for purposes of this 2016 Nexus Study to provide buffer for properties that cost more to manage and monitor.
- **PLT.** PLT provided M&M costs for four conservation properties recent CEs transactions; these costs include active M&M, 15% overhead, and maintenance of field equipment. PLT also cited the need for periodic surveys and aerial photos, but has not yet performed any of these on oak woodland properties.

Appendix A contains the detailed documentation supporting these cost estimates.[9]

Initial M&M

Initial M&M includes one-time costs spread over the first few years of managing and monitoring a conservation property as well as five years of typical M&M annual costs. One-time costs typically include baseline documentation, fuel load management, clearing of debris, establishment of fencing, active monitoring to ensure that OWAs are maintained, etc. LCO staff confirmed that Initial M&M costs are higher than Long-Term M&M costs; also, the Initial M&M stage lasts 2-5 years, to allow the LCOs to spread one-time costs over a number of years.

However, existing LCOs were unable to parse out the cost of Initial M&M activities. In some cases, Initial M&M costs are factored into the Acquisition price (in the form of M&M contracts, as well as a portion of contributions to a Stewardship Fund and/or Endowment Fund). Also, Initial M&M costs can vary significantly depending on the nature and needs of the property; for example, to the extent that a property is located in an urban area and/or has public access, Initial M&M costs tend to be higher because of the need to address recreation access, trespassing, dumping, fencing, etc.

[9] Estimated M&M costs for the PCCP were excluded from the final M&M cost per acre calculation because, at the time of preparing this Nexus Study, Placer County staff knowledgeable about oak woodland management were unavailable to provide clarifications regarding why this planning effort appeared to have a much lower cost per acre compared to other organizations actively engaged in M&M efforts.

PCCP planning efforts have considered Initial M&M activities for oak woodlands and other habitat; these planning efforts have identified a specific need for field facilities, (which would include equipment storage, manager's office, shared office, locker room, and restrooms), and an initial fuels treatment. Based on the financial planning worksheets developed by the PCCP, **Figure 3.9** provides an indication of one-time costs that can be incurred during the Initial M&M period.

3.9 *M&M Costs - Potential One-Time Costs*
2016$

Expenditure	Amount	Metric	Cost Per Acre
One-Time Activities (Year 0) [1]			
Field Facilities [2]	$500,000	Projected 48,250 acres within 50-yr permit period.	$10.36
Initial Management [3]	$1,800	Initial One-Time Cost per acre.	$1,800.00
Subtotal One-Time Activities			$1,810.36
Inflated to 2016$			$2,423.61
One-Time Costs Applied in this Analysis [4]			**$2,424.00**

Prepared by New Economics & Advisory, June 2016.

Source: Woodland Restoration Potential: Placer County Conservation Plan, Richard R. Harris, Ph.D., February 2013; and PCCP Cost Model 2013 Working 9/23/2013.

[1] Reflects cost of one-time activities conducted shortly after undertaking management and monitoring responsibilities.

[2] This estimated cost is currently incurred by Placer County as estimated for purposes of developing the Placer County Conservation Plan (PCCP). Field facilities could include equipment storage, offices for personnel, locker rooms and restrooms, etc. To ensure full funding for this nexus study, New Economics has integrated this cost into Initial M&M.

[3] Could include fuels management, fencing, clearing of debris, active monitoring, and other related efforts. This analysis applies the estimated cost of intial fuels management for woodland areas, based on an estimate created for the PCCP. A portion of gross Initial Management efforts may be integrated into acquisition costs, so the total cost for Initial Management could vary with each individual property acquisition.

[4] Figure rounded to nearest dollar.

In addition to these one-time costs, this analysis assumes that the Oak Resources LCO(s) will incur typical annual M&M costs shown in **Figure 3.8**. As a result, the Initial M&M period will include both one-time costs and annual M&M costs. This 2016 Nexus Study includes an Initial M&M period of five (5) years based on recommendation of LCOs and standard practices.

Figure 3.10 provides the total cost per acre for Initial M&M.

3.10 M&M Costs -- OWAs
2016$

Item	Cost per Acre
Initial M&M (Yrs. 1-5)	
One-Time Costs	$2,424
M&M Costs (Yrs. 1-5) [1]	$215
Total Initial M&M Costs	$2,639
Initial M&M Costs Applied in this Analysis [2]	**$2,600**

Prepared by New Economics & Advisory, June 2016.
[1] Reflects annual cost of $43 over five years.
[2] Figure rounded to nearest one hundred dollars.

Long-Term M&M

The ORMP requires M&M in perpetuity for OWAs. As a result, the OWA In-Lieu Fee is designed to fund annual M&M in perpetuity to ensure that conservation land can be adequately maintained over time. **Figure 3.8** establishes an annual M&M cost of $43 per acre; this figure forms the basis for Long- Term M&M costs on a per-acre basis.

Endowment Calculations

To ensure that Long-Term M&M can be provided in perpetuity, it is expected that Oak Resources LCOs will create an Endowment Fund whose annual interest accrual can be utilized to fund annual M&M. This 2016 Nexus Study establishes a Long-Term M&M Fee Component that reflects a contribution to an Endowment Fund.

New Economics & Advisory reviewed endowment rates utilized to establish other habitat-related fee programs, ten-year averages tracked by the National Association of College and University Business Officers (NACUBO), and goals established by select LCOs. These sources indicate that long-term interest rates range from 3 to 6 percent annually. **Technical Appendix B** contains documentation of this research.

Based on this range, New Economics & Advisory calculated an Endowment component for the OWA In-Lieu Fee that generates sufficient interest beginning in Year 8 to cover Long-Term Annual M&M costs. **Figure 3.11** calculates the lump-sum per-acre contribution needed to achieve 4% annual interest earnings that can fully fund annual M&M in perpetuity. **Figure 3.12** summarizes the resulting lump-sum contribution needed, on a per-acre basis, to create sufficient interest earnings to fully fund Long-Term M&M costs, at three different interest-earning rates, beginning in Year 8. **Technical Appendix B** provides the back-up technical documentation supporting the 3% and 6% interest rate. For purposes of establishing an Endowment component for this

fee study, the OWA In-Lieu Fee assumes the middle interest rate (4%) earnings assumption.

3.12 *Endowment Fee Component-- OWAs*
2016$

Item	Cost per Acre
Endowment Fee	
Assuming 6.0% annual interest	$550
Assuming 4.0% annual interest	$890
Assuming 3.0% annual interest	$1,250
Endowment Fee Applied in this Analysis	**$890**

Prepared by New Economics & Advisory, June 2016.
Source: See Technical Appendix for supporting calculations.

Administration

As described in more detail in **Section 7** of this Nexus Study, the County will be responsible for administration of the Oak Resources Fees. Administrative duties will include the calculation and collection of the fees, tracking of deposits, preparation of required reports, performance of annual inflation adjustments, and periodic updates to the Oak Resources In-Lieu Fees Nexus Study. The County also intends to track the location of OWAs purchased with In-Lieu Fee revenues; this effort is expected to require mapping services using Geographic Information Systems (GIS) or similar software. As such, the OWA In-Lieu Fee will include a 5% administrative cost for these administrative functions.

Total Costs

Figure 3.13 provides a summary of the total cost per acre to conserve OWAs through the In-Lieu fee program. This rate includes Acquisition, Initial M&M, Long-Term M&M, and Administration.

3.13 OWA Conservation Cost Components *Per Acre (2016$)*

Item	Amount Per Acre
Cost Components	
Acquisition (Direct or CE)	$4,400
Initial M&M (Years 1-5)	$2,600
Endowment (for Long Term M&M) [1]	$890
Subtotal Cost per Acre	**$7,890**
Administration (5%)	$395
Total Cost Per Acre	**$8,285**

Prepared by New Economics & Advisory, June 2016.
Source: See Technical Appendix for supporting calculations.
[1] Assumes that the Endowment Fund will generate interest earnings of 4%, enough to cover the cost of providing annual M&M monitoring in perpetuity.

4. Nexus, Fee Calculation, & Fee Act Findings – OWA In-Lieu Fee

This section documents the nexus for the study, calculates the proposed rates for the OWA In-Lieu Fee, and documents the findings of this Nexus Study consistent with the Mitigation Fee Act.

Nexus Requirements

In order to impose habitat conservation impact fees, this Nexus Study demonstrates that a reasonable relationship or "nexus" exists between new development that occurs within the County and the need to conserve OWA as a result of new development. More specifically, this Nexus Study presents the necessary findings in order to meet the procedural requirements of the Mitigation Fee Act, also known as AB 1600. The requirements are as follows:

1. Identify the purpose of the fee;
2. Identify the use to which the fee is to be put;
3. Determine how there is a reasonable relationship between the fee's use and the type of development project on which the fee is imposed;
4. Determine how there is a reasonable relationship between the need for the public facility and the type of development project on which the fee is imposed;
5. Determine how there is a reasonable relationship between the amount of the fee and the cost of the public facility or portion of the public facility attributable to the development on which the fee is imposed.

Step 1: Purpose of the Fee

The OWA In-Lieu Fee proposed by this Nexus Study is designed to fund mitigation of impacts to OWAs in the County through acquisition and conservation of similar types of OWAs elsewhere in the County.

The OWA In-Lieu Fee is intended to pay the full cost of acquiring, managing, and monitoring OWAs.

Step 2: Use of the Fee

The OWA In-Lieu Fee will be used to acquire OWA through direct property acquisition or acquisition of conservation easements; to conduct Initial M&M activities and Long-Term M&M activities designed to ensure conservation in perpetuity.

Step 3: Reasonable Relationship Between Fee Use & Development

The conservation of OWAs promotes the health, safety, and general welfare of El Dorado County by protecting significant historical heritage values, enhancing the beauty and complementing and strengthening zoning, subdivision and land use standards and

regulations, while at the same time recognizing individual rights to develop private property.

The General Plan identifies the following overarching objectives (County of El Dorado 2004) that relate to the relationship between the proposed fee and new development:

- To foster a rural quality of life;
- To sustain a quality environment;
- To conserve, protect, and manage the County's abundant natural resources for economic benefits now and for the future; and,
- To accomplish the retention of permanent open space/natural areas on a project-by-project bases through clustering.

The Conservation and Open Space Element further identifies the following Goals for biological resources (County of El Dorado 2004):

- Goal 7.4: Identify, conserve, and manage wildlife, wildlife habitat, fisheries, and vegetation resources of significant biological, ecological, and recreational value.

The conservation of OWAs enhances the County's natural scenic beauty, sustains the long-term potential increase in property values which encourages quality development, maintains the area's original ecology, retains the original tempering effect of extreme temperatures, increases the attractiveness of the County to visitors, helps to reduce soil erosion, and increases the oxygen output of the area which is needed to combat air pollution.

The development of new residential and non-residential land uses in the County may impact existing OWAs. The proposed OWA In-Lieu Fee, charged according to the impact on OWA, provides a means for development to occur while also achieving the environmental goals and objectives stated in the County General Plan . The proposed fee will be used to acquire and conserve other OWAs in perpetuity, thereby furthering the County's overarching objectives and biological resources goal stated above.

A reasonable relationship exists between the need for the OWA In-Lieu Fee and new development that would pay the fee.

Step 4: Reasonable Relationship Between Conservation Need & Development

Each new development project that impacts OWAs triggers a need for conservation measures in order to implement the overarching objectives and biological goals of the County General Plan. Mitigation of impacts to OWAs can occur through replacement tree planting on- or off-site, offsite conservation, and/or payment of an OWA In-Lieu Fee. The proposed OWA In-Lieu Fee is designed to mitigate the impacts of removing OWA. The costs associated with the Acquisition, Initial M&M, and Long-Term M&M of OWAs are accounted for in the OWA In-Lieu Fee.

Step 5: Reasonable Relationship[10] Between Fee Amount & Mitigation Cost

The amount of the OWA In-Lieu Fee is proportional to the cost of mitigating impacts to OWAs by new development; the in-lieu fee paid by new development is calculated based on the the mitigation ratios set forth in the ORMP and the cost per acre to provide for OWA conservation, determined through an analysis of costs currently incurred by existing LCOs. Should new development choose the in-lieu fee option, the fee amount will be based on the scale of impacts and the mitigation ratio for that scale of impacts, as defined in the ORMP and the Oak Resources Conservation Ordinance.

Fee Calculation

This Nexus Study provides the basis upon which a new OWA In-Lieu Fee is calculated. **Figure 4.1** summarizes the detailed cost components, shown on a per-acre basis, associated with acquisition, Initial M&M, and Long-Term M&M of OWAs actively managed by the LCO. To this total cost, an administrative component of 5% is added to cover the cost of administering and updating the fee program, calculating total fee obligations for each development opting to pay the OWA In-Lieu Fee, collecting fee revenues, and transferring these revenues to one or more Oak Resources LCO(s).

4.1 ***Detailed OWA Cost Composition per Acre (2016$)***

Item	Amount per Acre
OWA Cost Components	
Acquisition	$4,400
Initial M&M (Years 1-5)	$2,600
Endowment (for Long Term M&M)	$890
Subtotal Cost	**$7,890**
Administration (5%)	$395
Total Cost	**$8,285**

Prepared by New Economics & Advisory, June 2016.

Figure 4.2 shows the resulting fee, according to the level of OWA Impacts, made by new development. These rates would be set uniformly within the ORMP boundary

[10] California State Code does not define "reasonable relationship" but it is certainly broader than the "proportionate benefit" requirement for assessments (California Government Code 36620-36630). Over time the phrase "reasonable relationship" has been interpreted by preparers of fee studies to mean that there is a logical connection between the purpose of the fee and the rate assigned to those paying the fee.

(delineated in **Figure 2.1** in **Section 2**), and would be charged per OWA acre impacted. As described previously, impacted OWAs will be identified in an ORTR prepared by a qualified professional retained by the Project Applicant during the development review process.

4.2 *Oak Woodland Area In-Lieu Fee Rates*
2016$

Item	Oak Woodland Areas 0.01 - 50.0% Impact	50.01 - 75.0% Impact	75.01 - 100.0% Impact
	per acre		
Cost Per Acre	$8,285	$8,285	$8,285
Mitigation Ratio [1]	1.0 : 1	1.5 : 1	2.0 : 1
Total Fee Per Acre	**$8,285**	**$12,428**	**$16,570**

[1] Mitigation ratios established in the ORMP (Section 2.2.2).
Prepared by New Economics & Advisory, June 2016.

Fee Calculation Example

For example, if a developer wanted to remove 60% of a 10-acre OWA by paying the OWA In-Lieu Fee, the fee would be calculated as follows:

1. Acres Impacted: 10 acres times 60% = 6 acres
2. Cost Per Acre = $8,285 per acre
3. Mitigation Ratio = 1.5 : 1.0
4. Mitigation Fee Per Acre (1.5 times $8,285) = $12,428
5. Fee = 6 acres times $12,428 per acre = $74,568 OWA In-Lieu Fee.

5. Costs to Replace IOTs

New development that impacts IOTs will have two options to mitigate impacts: plant replacement trees on- or offsite and/or pay an In-Lieu Fee.[11]. This section of the Nexus Study describes the costs associated with mitigation through an IOT In-Lieu Fee.

Conservation Overview

For individual IOTs, the in-lieu fee is based on a diameter inch-for-inch replacement approach. This approach accounts for costs associated with acquisition and planting, expressed on a "per 1 inch of trunk diameter" basis.

It is expected that the Oak Resources LCO(s) will incur one cost to acquire and plant replacement trees, and another cost to conduct management and monitoring during an Initial M&M period of seven (7) years. This time period is a requirement of the ORMP, consistent with state regulations (California Public Resources Code Section 20183.4). **Figure 5.1** provides examples of conservation activities during each of these stages.

[11] On- or off-site mitigation would require a conservation easement to ensure conservation in perpetuity.

5.1 ***Typical Conservation Activities-- IOTs***
Acquisition, Management, and Monitoring

Acquisition/Planting	Initial M&M
Planting	Irrigation
Tree Acquisition	Weed Control
Due Diligence Surveys/Analyses	Staking
Aerial Photos	Mulching
	Minor Canopy Pruning
	Monitoring
	Removal of Irrigation or Protection Materials at the end of the Maintenance Period
	Installation of Above/Below Ground Protection Devices (cages, tubes, etc.)
	Pest and Disease Control (application of herbicide, fungicide, etc.)

Prepared by New Economics & Advisory, June 2016.
Sources: California Council of Land Trust website accessed May 2015; Land Trust Alliance website, accessed May 2015; New Economics internet research, interviews; and land conservation organization feedback, April-June 2015.

This Nexus Study assumes that IOT In-Lieu Fees will be used to plant replacement trees on properties owned and managed by the Oak Resources LCO(s); this assumption was developed in consultation with LCOs, whose staff confirmed that they only plant new trees on property they own, and not on property for which they only hold a CE.

As such, Long Term M&M costs for these replacement trees will be absorbed into the costs of managing and monitoring land acquired primarily for purposes of conserving OWAs. Therefore, no incremental Long-Term M&M cost component is included in the IOT In-Lieu Fee.

Acquisition and Planting (Year 0)

Dudek developed costs for purchasing and planting IOTs. The estimated cost for the equivalent of one inch of trunk diameter is a 1-gallon size native oak tree; the median price of 1-gallon oak trees was calculated from a survey of eight nurseries in El Dorado County and the surrounding region. Consistent with standard landscape/habitat restoration industry practices, this median price ($60) was then doubled to account for costs associated with planting (inclusive of labor and materials), as described in the

ORMP. The resulting per-inch individual native oak tree mitigation fee is $120.00, as shown in **Figure 5.2**

5.2 *IOT Tree Acquisition Price*
Local Nurseries (2016$)

Nursery	Location	Price
Nursery Purchase Prices [1]		
Intermountain Nursery	Prather	$9.95
Lu Restoration Nursery	Sheridan	$4.70
Urban Tree Farm	Fulton	$6.00
Cornflower Farms	Elk Grove	$10.87
Median Purchase Price per 1-gallon Tree (1/2 diameter inch)		**$7.98**
Estimated Acquisition Price per Diameter Inch		
Estimated Purchase Price per Diameter Inch [2]		$15.95
Estimated Cost for Installation [3]		$15.95
Estimated Acquisition Cost per Diameter Inch		**$31.90**

Prepared by New Economics & Advisory, June 2016.
Source: Dudek, June 2016.
[1] 1-gallon oak tree at local nurseries.
[2] This analysis assumes that a 1-gallon tree represent the equivalent of 1/2 diameter inch of tree trunk, so the median cost per tree is doubled to derive the cost per diameter inch of trunk.
[2] Doubling the tree acquisition price is a standard industry approach utilized to estimate total planting costs per diameter inch.

Initial M&M (Years 1-7)

Figure 5.3 shows the cost of conducting Initial M&M for IOTs on a per diameter-inch basis. Habitat Restoration Sciences, Inc. (HRS), a subsidiary of Dudek that provides native habitat restoration services in California, prepared a cost estimate for Initial M&M for IOTs based on a hypothetical planting scenario. The hypothetical scenario assumes a planting of 1,000 1-gallon oak trees (each tree representing one diameter inch of trunk), each with a planting radius of approximately 5 feet; this scale of planting requires approximately 1.80 acres. HRS applied its technical experience conducting tree establishment and maintenance to the planting scenario to estimate annual M&M costs during the first seven years. Because this analysis relies on a 1-gallon tree, which represents ½ diameter inch of trunk, the cost is doubled to reflect the cost of maintaining two trees instead of one for each diameter inch of trunk. The estimated

amount includes costs associated with ensuring that the replacement tree grows properly, irrigation, fencing/caging, pruning and pest/disease control (as listed in **Figure 4.1**) are some of the active management efforts undertaken during this stage.

5.3 *IOT Initial M&M Cost Assumption*
2016$

Item	Per Acre Cost [1],[2]	Avg. Annual M&M [3]
IOT Initial M&M		
Year 1	$6,000	$10,800
Year 2	$5,500	$9,900
Year 3	$5,000	$9,000
Year 4	$4,500	$8,100
Year 5	$4,000	$7,200
Year 6	$3,500	$6,300
Year 7	$3,000	$5,400
Subtotal Costs (Yr 1-7)		**$56,700**
Cost Per Tree/Diameter Inch (Yr 1-7)		**$56.70**
Estimated IOT Initial M&M Cost Assumption		
Cost Per Diameter Inch Assuming 1-Gallon Tree (Yr 1-7) [4]		**$113.40**

Prepared by New Economics & Advisory, June 2016.
Source: Habitat Restoration Sciences, Inc., June 2015 and April 2016.

[1] Assumes a hypothetical planting of 1,000 oak trees (each tree representing one diameter inch). Assumes a radius of 5 feet around each planting location. Therefore the total site area is 1.80 acres; this calculation was made by HRS.

[2] If total area is less than one acre, unit cost may need to increase to account for overhead costs.

[3] Unit price per acre per year typically will not drop below $2,500 per acre.

[4] Each 1-gallon tree represents a one-half inch diameter of trunk, so two trees must be maintained for every diameter inch of trunk. Therefore, the maintenance cost per diameter inch is doubled to reflect the cost of maintaining two trees instead of one for each diameter inch of trunk.

Administration

As described in more detail in **Section 7** of this Nexus Study, the County will be responsible for administration of the Oak Resources Fees. Administrative duties will include the calculation and collection of the fees, tracking of deposits, preparation of required reports, performance of annual inflation adjustments, and periodic updates to the Oak Resources In-Lieu Fees Nexus Study. The County may also desire to track the

location of IOTs planted with In-Lieu Fee revenues; this effort is expected to require mapping services using Geographic Information Systems (GIS) or similar software. As such, the IOT In-Lieu Fee will include a 5% administrative cost for these administrative functions.

Total Costs

Figure 5.4 provides a summary of the total cost per acre to replace IOTs through an In-Lieu fee program. This rate includes Acquisition, Initial M&M, and Administration.

5.4 *IOT Conservation Cost Components*
Per Diameter Inch (2016$)

Item	Amount per Diameter Inch
IOT Cost Components	
Acquisition	$31.90
Initial M&M (Years 1-7)	$113.40
Endowment (for Long Term M&M) [1]	N/A
Subtotal Cost	$145.30
Administration (5%)	$7.27
Cost per Diameter Inch	$152.57
Total Cost Per Diameter Inch (Rounded) [2]	**$153.00**

Prepared by New Economics & Advisory, June 2016.
Source: See Technical Appendix for supporting calculations.
[1] Replacement trees will be planted on land owned and managed by the land conservation organization also overseeing Oak Woodland Areas; Long-Term M&M costs are expected to be nominal and will be absorbed into the Oak Resource LCO's overall M&M costs.
[2] Total rounded to nearest whole dollar.

6. Nexus, Fee Calculation, and Fee Act Findings – In-Lieu Individual Oak Tree Fee

This section documents the nexus for the study, calculates the proposed rates for the IOT In-Lieu Fee, and documents the findings of this Nexus Study consistent with the Mitigation Fee Act.

Nexus Requirements

In order to impose habitat conservation impact fees, this Nexus Study demonstrates that a reasonable relationship or "nexus" exists between new development that occurs within the County and the need to conserve and replace IOTs as a result of new development. More specifically, this Nexus Study presents the necessary findings in order to meet the procedural requirements of the Mitigation Fee Act, also known as AB 1600. The requirements are as follows:

1. Identify the purpose of the fee;
2. Identify the use to which the fee is to be put;
3. Determine how there is a reasonable relationship between the fee's use and the type of development project on which the fee is imposed;
4. Determine how there is a reasonable relationship between the need for the public facility and the type of development project on which the fee is imposed;
5. Determine how there is a reasonable relationship between the amount of the fee and the cost of the public facility or portion of the public facility attributable to the development on which the fee is imposed.

Step 1: Purpose of the Fee

The IOT In-Lieu Fee proposed by this Nexus Study is designed to fund mitigation of impacts to IOTs in the ORMP boundaries through replacement planting elsewhere in the County.

The IOT In-Lieu Fee is intended to pay the full cost of tree acquisition, planting, and maintenance for a 7-year period.

Step 2: Use of the Fee

The IOT In-Lieu Fee will be used to acquire and plant individual replacement trees and perform M&M activities for a period of 7 years.

Step 3: Reasonable Relationship Between Fee Use & Development

The replacement of IOTs promotes the health, safety, and general welfare of El Dorado County by protecting significant historical heritage values, enhancing the beauty and

complementing and strengthening zoning, subdivision and land use standards and regulations, while at the same time recognizing individual rights to develop private property.

The replacement of IOTs enhances the County's natural scenic beauty, sustains the long-term potential increase in property values which encourages quality development, maintains the area's original ecology, retains the original tempering effect of extreme temperatures, increases the attractiveness of the County to visitors, helps to reduce soil erosion, and increases the oxygen output of the area which is needed to combat air pollution.

The General Plan identifies the following overarching objectives (County of El Dorado 2004) that relate to the relationship between the proposed fee and new development:

- To foster a rural quality of life;
- To sustain a quality environment;
- To conserve, protect, and manage the County's abundant natural resources for economic benefits now and for the future;
- To accomplish the retention of permanent open space/natural areas on a project-by-project bases through clustering;

The Conservation and Open Space Element further identifies the following Goal for biological resources (County of El Dorado 2004):

- Goal 7.4: Identify, conserve, and manage wildlife, wildlife habitat, fisheries, and vegetation resources of significant biological, ecological, and recreational value.

The development of new residential and non-residential land uses in the County may result in a loss of existing IOTs. The proposed IOT In-Lieu Fee, charged according to the impact on IOTs, provides a means for development to occur while also achieving the environmental goals and objectives stated in the County General Plan. The proposed fee will be used to acquire and plant replacement trees and maintain them for a period of 7 years, thereby furthering the County's overararching objectives and biological resources goal stated above.

A reasonable relationship exists between the need for the IOT In-Lieu Fee and new development that would pay the fee.

Step 4: Reasonable Relationship Between Conservation Need & Development

Each new development project that impacts IOTs triggers a need for conservation measures in order to implement the overarching objectives and biological goals of the County General Plan. As established in the ORMP and Oak Resources Conservation Ordinance, mitigation of impacts to IOTs can occur through replacement tree planting on- or off-site and/or payment of an IOT In-Lieu Fee. The fee is designed to mitigate the impacts of removing Heritage Oak Trees or Native Oak Trees outside of OWAs. The costs associated with the acquisition and planting and maintenance for a period of 7 years is accounted for in the respective In-Lieu Fee program.

Step 5: Reasonable Relationship[12] Between Fee Amount & Mitigation Cost

The amount of the IOT In-Lieu Fee for impacts to IOTs is proportional to the cost of mitigating impacts to IOTs for non-exempt development activities; the in-lieu fee amount is calculated based on the the mitigation ratios set forth in the ORMP and Oak Resources Conservation Ordinance and the cost to meet said requirements. Should a project proponent for non-exempt activities choose the in-lieu fee option, the fee amount will be based on the scale of impacts and the mitigation ratio that scale of impacts.

The total fee for non-exempt activities is proportional to the scale of the impact based on the size (based on diameter inches) of the impacted tree(s). As explained previously, the fee is based on hypothetical scenario assuming a planting of 1,000 1-gallon oak trees, each with a planting radius of approximately 5 feet. HRS applied its technical experience conducting tree establishment and maintenance to the planting scenario to estimate annual M&M costs during the first seven years on a per-acre basis.

For example, a removed Native Oak Tree with a 10-inch trunk diameter would require mitigation for 10 diameter inches, based on the inch-for-inch replacement requirement in the ORMP. The IOT In-Lieu Fee assumes that a 1-gallon size replacement tree equals 1 inch in trunk diameter; therefore, mitigation for removal of a 10-inch native oak tree requires planting and maintenance of 10 1-gallon trees.

Fee Calculation

This Nexus Study provides the basis upon which a new IOT In-Lieu Fee is calculated. **Figure 6.1** summarizes the detailed cost components, shown on a per-diameter inch basis, associated with acquisition/planting and maintenance for 7 years undertaken by the Oak Resources LCO(s). To this total cost, an administrative component of 5% is added to cover the cost of administering and updating the fee program, calculating total fee obligations for each development opting to pay the IOT In-Lieu Fee, collecting fee revenues, and transferring these fee revenues to the Oak Resources LCO(s).

[12] California State Code does not define "reasonable relationship" but it is certainly broader than the "proportionate benefit" requirement for assessments (California Government Code 36620-36630). Over time "reasonable relationship" has been interpreted by preparers of fee studies to mean that there is a logical connection between the purpose of the fee and the rate assigned to those paying the fee.

6.1 Detailed IOT Cost Composition
2015$

Item	Amount per Diameter Inch
Cost Components	
Acquisition	$31.90
Initial M&M (Years 1-7)	$113.40
Endowment (for Long Term M&M) [1]	N/A
Subtotal Cost	$145.30
Administration (5%)	$7.27
Cost per Diameter Inch	$152.57
Total Cost (Rounded) [2]	**$153.00**

Prepared by New Economics & Advisory, June 2016.

[1] Replacement trees will be planted on land owned and managed by the land conservation organization also overseeing Oak Woodland Areas; Long-Term M&M costs are expected to be nominal and will be absorbed into the Oak Resource LCO's overall M&M costs.

[2] Total rounded to nearest whole dollar.

Figure 6.2 shows the resulting fee, according to the cost and mitigation ratio, made by new development, for Heritage Oak Trees compared to Native Oak Trees. These rates would be set Countywide within the ORMP boundary, and would be charged on a per IOT tree diameter inch impacted.

6.2 IOT In-Lieu Fee Rates
2015$

Item	Heritage Oak Trees	Native Oak Trees
	per diameter inch	
Cost Per Acre	$153	$153
Mitigation Ratio[1]	3 : 1	1 : 1
Total Fee Per Acre	**$459**	**$153**

[1] Mitigation ratios are established in the ORMP (Section 2.3.2 Oak Tree Mitigation Standards).

Prepared by New Economics & Advisory, June 2016.

Fee Calculation Example

For example, if a developer wanted to remove one 50-inch diameter Heritage Oak Tree and one 10-inch Native Oak Tree, the IOT In-Lieu Fee would be calculated as follows:

Heritage Oak Tree In-Lieu Fee Calculation

1. Diameter Inches Impacted: 1 tree at 50 diameter inches = 50 diameter inches
2. Cost Per Diameter Inch = $153 per diameter inch
3. Mitigation Ratio: 3.0 to 1.0 diameter inch impacted
4. Fee = 50 diameter inches times $153 per acre times 3.0 per diameter inch ratio = $22,950 Heritage Oak Tree In-Lieu Fee

Native Oak Tree In-Lieu Fee Calculation

1. Diameter Inches Impacted: 1 tree at 10 diameter inches = 10 diameter inches
2. Cost Per Diameter Inch = $153 per diameter inch
3. Mitigation Ratio: 1.0 to 1.0 diameter inch impacted
4. Fee = 10 diameter inches times $153 per acre times 1.0 per diameter inch ratio = $1,530 Native Oak Tree In-Lieu Fee

Total IOT In-Lieu Fee: $22,950 Heritage Oak Tree In-Lieu Fee + $1,530 Native Oak Tree In-Lieu Fee = $24,480 Total IOT In-Lieu Fee.

7. Implementation & Administration

This concluding section of this Oak Resources Nexus Study provides an overview of implementation and administrative procedures. This section applies collectively to all Oak Resources In-Lieu Fees analyzed in this Nexus Study.

Adoption and Authorization

After review and consideration and having conducted a public hearing, the El Dorado County Board of Supervisors will consider adopting this Oak Resources In-Lieu Fee Nexus Study and the Oak Resources Conservation Ordinance establishing the Oak Resources In-Lieu Fees and authorizing collection of said fees. The fee will be effective 30 days following the El Dorado County Board of Supervisors final action of the adoption of the Nexus Study, and all ordinances and/or resolutions establishing or authorizing the fee(s).

Establishment of Fees

With respect to OWAs, this program applies to any land development project requiring a discretionary entitlement from the County that is subject to review under CEQA and which will have an impact on Oak Resources. With respect to IOTs, this program applies to any activity requiring a building permit or grading permit issued by El Dorado County and/or any action requiring discretionary development entitlements or approvals from El Dorado County, other than those activities identified in the Exemptions section. The Oak Resources In-Lieu Fees shall be charged on non-exempt development activities that impact Oak Resources; these impacts will be documented in an ORTR. Impacts occurring on either public or private property are subject to this program.

The Oak Resources Fees shall be calculated during the development review process or prior to grading permit issuance for projects not subject to development review. The fees shall be calculated based on impacts identified in an ORTR and will be consistent with the mitigation ratios described in **Section 1** of this Nexus Study.

Timing of Collection of Fees

Oak Resources In-Lieu Fees shall be collected prior to issuance of a grading or building permit, filing of a parcel or final map, or otherwise commencing with the development project.

The Oak Resources Fees shall be collected by the County's Community Development Agency, Development Services Division. The County shall maintain the account.

Exemptions

Removal of OWAs and IOTs are exempt from mitigation requirements, including participation in the Oak Resources In-Lieu Fees, for certain activities. These activities, documented in detail in Section 2 of the ORMP, include:

- Projects or actions occurring on lots of 1 acre or less allowing a single-family residence by right, and that cannot be further subdivided without a General Plan Amendment or Zone change;
- Actions taken pursuant to an approved Fire Safe Plan for existing structures or in accordance with defensible space maintenance requirements for existing structures in state responsibility areas (SRA) as identified in California Public Resources Code (PRC) Section 4291 (actions associated with Fire Safe Plans or defensible space areas for new or proposed development are not exempt);
- Actions taken to maintain safe operation of existing utility facilities in compliance with state regulations (PRC 4292-4293 and California Public Utilities Commission (CPUC) General Order 95) (actions associated with development of new utility facilities, including transmission or utility lines, are not exempt);
- Road widening and realignment projects necessary to increase capacity, protect public health, and improve safe movement of people and goods in existing public rights-of-way (as well as acquired rights-of-way necessary to complete the project) where the new alignment is dependent on an existing alignment (new proposed roads within the County Circulation Element and internal circulation roads within new or proposed development are *not* exempt);
- Affordable housing projects for lower income households, as defined pursuant to Section 50079.5 of the California Health and Safety Code, that are located within an urbanized area, or within a sphere of influence as defined pursuant to California Government Code §56076;
- Agricultural activities conducted for the purposes of producing or processing plant and animal products or the preparation of land for this purpose;
- Agricultural cultivation/operations, whether for personal or commercial purposes (excluding commercial firewood operations);
- Activities occurring on lands in Williamson Act Contracts or under Farmland Security Zone Programs;
- Actions taken during emergency firefighting operations or natural disasters (e.g., floods, landslides, avalanches) and associated post-fire or post-disaster remediation activities;
- Tree removal permitted under a Timber Harvest Plan approved by CAL FIRE;
- Native oak tree removal when the tree is dead, dying, or diseased, as documented in writing by a Certified Arborist or Registered Professional Forester;

- Native oak tree removal when a tree exhibits high failure potential with the potential to injure persons or damage property, as documented in writing by a Certified Arborist or Registered Professional Forester; or
- When a native oak tree, other than a Heritage Tree, is cut down on the owner's property for the owner's personal use.

Fee Rate Reductions for Affordable Housing Projects

The ORMP also provides for reductions to OWA mitigation for affordable housing projects that are not exempted as defined above. Specifically, development projects that propose a minimum of 10 percent of the dwelling units as income restricted affordable units, as defined by California Health and Safety Code §50052.5, 50053, and 50093, shall be granted a reduction in the amount of oak woodland that is required to be mitigated, as set forth below in **Figure 7.1**. This reduction for affordable housing project applies only to OWA impacts and does not apply to IOT impacts.

7.1 *Affordable Housing Mitigation Reduction*
ORMP

Affordable Housing Type (Household Income Level)	Percent Oak Woodland Mitigation Reduction (for portion of project that is income restricted)
Very Low	200%
Lower	100%
Moderate	50%

Source: Oak Resource Management Plan, June 2016.

For example, a proposed project that contains 1,000 units will include 200 (or 20%) *moderate-income* units. The project's ORTR indicates an impact on 70% of existing OWAs. The developer chooses to pay the OWA In-Lieu Fee to meet the mitigation obligation. The rate reduction for affordable housing would be calculated as follows:

- **Step 1: Establish the Original Mitigation Ratio.** The Original Mitigation Ratio would be 1.50 to 1 for a 70% impact on OWAs.
- **Step 2: Identify the Portion of the Affordable Units.** Affordable housing constitutes 20% of the residential units.
- **Step 3: Identify the Affordable Housing Reduction Rate.** Moderate-income units qualify for a 50% reduction.
- **Step 4: Calculate the Mitigation Reduction Amount.** The Mitigation Reduction is calculated by multiplying the 50% moderate-income reduction times the 20% affordable housing share. 50% times 20% = 10% Mitigation Reduction Amount.
- **Step 5: Calculate the Adjusted Mitigation Rate**. The Adjusted Mitigation Obligation is: 1.50 minus 10% (0.15) = 1.35 Adjusted Mitigation Ratio.

Administration and Administrative Fee

The County Community Development Agency shall be responsible for administration of the Oak Resources Fees, including the calculation and collection of the fees, tracking of deposits, preparation of required reports, annual inflation adjustments, and periodic updates to the Oak Resources In-Lieu Fees Nexus Study. The County also intends to track the location of OWAs purchased with In-Lieu Fee revenues; this effort is expected to require mapping services using Geographic Information Systems (GIS) or similar software. As such, the County will retain the 5% administrative cost portion of the Fee described in this Nexus Study for these purposes.

It is the County's intent to work with one or more Oak Resources LCOs to acquire as well as manage and monitor OWAs, and acquire/plant as well as manage and monitor replacement Heritage Oak Trees, and Native Oak Trees. The County will transfer fee revenues (excluding the 5% administrative cost) to said LCO on a quarterly basis subject to County approval of acquisition, maintenance and monitoring actions.

Annual Inflation Adjustment

An annual adjustment for cost escalations influenced by changes in land values affecting acquisition, conservation easement values, as well as property tax obligations and organizational overhead costs (e.g. rent, wages, benefits, equipment, etc.) shall be applied to the Oak Resources Fees. The Oak Resources Fees shall be subject to an annual inflation fee that accounts for changes in acquisition/planting, Initial M&M, and Long-Term M&M costs.

OWA Fee Adjustment

OWA Acquisition Cost Component

The Acquisition Cost Component of the OWA fee is driven largely by land values within El Dorado County. Over time, land purchased for the express purpose of mitigation may develop a value that is different from land purchased for its development potential. This trend should be monitored over time. This Nexus Study initially recommends that the Acquisition Component of the OWA Fee be consistent with increases in assessed value for the County overall; future updates to the Nexus Study should revisit this measure to determine whether mitigation land purchases are changing at a different rate than assessed value countywide.

Consistent with the 2008 OWMP Fee Study, this Nexus Study recommends that the Acquisition Portion of the OWA In-Lieu Fee be adjusted annually by a three-year average change in assessed valuation countywide for all land uses or for vacant land containing OWAs. The County Assessor's Office can calculate this value each year.

OWA Initial M&M Cost Component

Initial M&M is influenced most heavily by salaries/wages, including staff and consultant costs. Because these costs are driven primarily by staff time, this fee component should

be adjusted based on labor costs. Consistent with the 2008 OWMP Fee Study, this Nexus Study recommends that the Initial M&M Portion of the OWA In-Lieu Fee be adjusted annually based on changes in wages for Forest and Conservation workers (occupation code 45-4011) in California. These wage rates currently track the pay period including the 12th day of May or November, and are published in May of each year (containing data from the previous year). The data can be found here: http://www.bls.gov/oes/tables.htm.

OWA Endowment Cost Component (OWA Long-Term M&M)

Long-Term M&M is influenced by two variables: the annual cost of M&M and the interest earnings rate on the Endowment Fund. Both of these variables should be tracked and updated. On an annual basis, the Endowment Component should be adjusted based on any changes in annual M&M costs. Because these costs are driven primarily by staff time, this fee should be adjusted based on labor costs, similar to Initial M&M.

However, changes in annual M&M do not have a 1:1 impact on the Endowment; if, for example, annual M&M costs increase by 10%, the Endowment Fee would need to increase about 12% in order for the Endowment to remain self-sustaining.

As a result, this Nexus Study recommends that the Endowment Cost component be increased annually based on labor wage changes and include an additional 2 percent adjustment for every 10 percent change in wages. **Figure 7.2** provides an example of how this adjustment calculation would work.

7.2 *Endowment Component Fee Adjustment*
OWA In-Lieu Fee

Item	Formula	Oak Woodland Areas 0.01 - 50.0% Impact	75.0% Impact	100.0% Impact
Existing Endowment Fee Component	A	$890	$890	$890
Change In Labor Costs (example)	B	4.0%	4.0%	4.0%
Additional Adjustment per 10%	C = 2% * (B/10%)	0.8%	0.8%	0.8%
Total Adjustment (%)	D = B + C	4.8%	4.8%	4.8%
Total Adjustment (amount)	E = A* D	$43	$43	$43
Total Adjustment Cost Per Acre [1]	**F = A + E**	**$933**	**$933**	**$933**

Prepared by New Economics & Advisory, June 2016.
[1] Total rounded to nearest whole dollar.

OWA Inflation Adjustment Summary

The OWA In-Lieu Fee would be adjusted annually as follows:

1. Adjust Acquisition Cost Component
2. Adjust Initial M&M Cost Component
3. Adjust Long-Term M&M Cost Component

4. Recalculate Total Cost per Acre (including 5% Administrative Fee component)
5. Recalculate Fees based on Mitigation Ratios

IOT Fee Adjustment

IOT Acquisition/Planting Cost Component

This component of the fee was developed by doubling the identified cost of purchasing a new 1-gallon oak tree; as described in the ORMP, this approach reflects a standard industry approach to account for labor costs associated with tree planting. Because acquisition is the primary driver, County staff could check on the price from existing nurseries and recalculate the average cost each year.

IOT Initial M&M Cost Component

This component of the IOT In-Lieu Fee appears to be largely driven by labor costs. This Nexus Study recommends that the Initial M&M Portion of the IOT In-Lieu Fee be adjusted annually based on changes in wages for Forest and Conservation workers (occupation code 45-4011) in California. These wage rates currently track the pay period including the 12th day of May or November, and are published in May of each year (containing data from the previous year). The data can be found here: http://www.bls.gov/oes/tables.htm.

IOT Inflation Adjustment Summary

The IOT In-Lieu Fee would be adjusted annually as follows:

1. Adjust Acquisition/Planting Cost Component based on changes in the cost for one 1-gallon oak tree at local nurseries.
2. Adjust Initial M&M Cost Component based on changes in labor wages.
3. Recalculate Total Cost per Acre (including 5% Administrative Fee component)
4. Recalculate Fees based on Mitigation Ratios

Annual Findings/Accounting

The Community Development Agency shall prepare, once each fiscal year for the Board of Supervisors, a report of any portion of Oak Woodland Resources Fees remaining unexpended or uncommitted five or more years after deposit of the Fees, identifying the purpose to which the Fees are to be put, and demonstrating a reasonable relationship between the Fees and the purpose for which they were charged.

Refund of Unexpended Revenues

Except as provided by County Code, the County shall refund to the then current record owner or owners of each unit of development on a prorated basis the unexpended or uncommitted portion of the Oak Resources Fees, and any interest accrued thereon, for which need cannot be demonstrated.

Such refund of unexpended or uncommitted revenues may be made by direct payment from the applicable trust fund, by providing a temporary suspension of fees, or by any other means consistent with the intent of Government Code Section 66001.

Reallocation of Remaining Revenues

If the administrative costs of refunding unexpended or uncommitted revenues exceed the amount to be refunded, the County, after a public hearing, notice of which has been published under Government Code Section 6061 and posted in three prominent places within the area of the development project, may determine that the revenues shall be allocated for some other purpose for which fees are collected subject to Section 66000 of the Government Code.

Other Periodic Reviews and 5-Year Updates

As El Dorado County's Oak Resources In-Lieu Fees are implemented, the County will be able to track actual costs related to direct acquisition, conservation easements, overhead, wages, and management and monitoring costs. As such, this Nexus Study should be considered a living document that will need to be updated as new information becomes available and key assumptions can be appropriately refined. Periodically, the real estate market and broader economy undergoes more dramatic changes in land, and/or construction labor costs. The County may conduct additional periodic review at any time to determine if costs and/or fees require further adjustments. These periodic and/or 5-year update reviews could include changes to the following assumptions:

- Land acquisition values for mitigation land
- Conservation Easement values for mitigation land
- The proportion of Conservation Easements versus direct acquisition of conservation land
- Initial Annual M&M costs
- Long-Term Annual M&M costs
- Endowment interest earnings rate
- Annual adjustment procedures and assumptions
- IOT acquisition and planting costs

Beginning with the fifth fiscal year following the first deposit into the fee account or fund, and every five years thereafter, El Dorado County is required to make certain findings pertaining to unexpended balances. The required findings include:

1. Identifying the purpose for which the fee is to be used.
2. Demonstrating a reasonable relationship between the fee and its purported purpose.
3. All sources and amounts of funding anticipated to complete financing in incomplete plan area improvements.
4. Recalculate/recalculate annual adjustment factor.

5. For any unexpended or uncommitted revenues El Dorado County cannot demonstrate a need based on the four findings described above, El Dorado County must refund such revenues, unless the administrative costs exceed the amount of the refund.

Appendix A: Supporting Calculations for OWA Conservation

A1 *Individual Vacant Land Comparables*

El Dorado County, 2004-2014 (Nominal Dollars)

APN		Subdivision/Tract	Oak Woodland ID [1]	Zoning	Total Acres [1]	Oak Woodland Areas: OWA Acres	Oak Woodland Areas: % of Total Acres	Sale Date	Sale Price	Sales Price Per Acre
RE-10 Zoning										
046-720-06-100	[2]	River Pines Est. #4	7	RE-10	22.24	0.223720	1.01%	8/18/04	$249,950	$11,239
046-720-11-100		**River Pines Est. #4**	**7**	**RE-10**	**70.85**	**60.022561**	**84.72%**	**6/29/12**	**$145,000**	**$2,047**
046-720-06-100	[2]	River Pines Est. #4	7	RE-10	22.24	0.223720	1.01%	1/8/14	$165,000	$7,419
104-481-07-100		Pilot Hill Crossing	19	RE-10	12.55	0.000012	0.00%	7/12/12	$50,000	$3,984
046-710-19-100		River Pines Est. #3	6	RE-10	13.59	0.000115	0.00%	5/21/13	$125,000	$9,198
046-720-04-100		River Pines Est. #4	6	RE-10	32.96	0.000148	0.00%	8/14/07	$385,000	$11,681
Weighted Average										**$6,421**
RE-2 Zoning										
092-301-06-100	[2]	Golden West Par #5	9	R2A	2.88	0.000001	0.00%	4/30/04	$185,000	$64,256
092-301-06-100	[2]	Golden West Par #5	9	R2A	2.88	0.000001	0.00%	5/25/05	$265,000	$92,042
092-301-06-100	[2]	Golden West Par #5	9	R2A	2.88	0.000001	0.00%	2/6/08	$226,200	$78,565
092-293-11-100		Golden West Par #5	9	R2A	2.51	0.000024	0.00%	7/23/14	$90,000	$35,796
Weighted Average										**$68,708**

Prepared by New Economics & Advisory, June 2016.

[1] Oak Woodland ID identifies woodland areas that cross a parcel to identify all parcels within the same cluster area.

[1] Acres are calculated from GIS basemap polygons or property data collected from recorded maps or other means.

[2] Parcel has been bought and sold multiple times.

Source: El Dorado County staff, March 2015.

A2.1 *American River Conservancy Recent Direct Land Acquisitions*
2013-2015 (Nominal Dollars)

Item	El Dorado Ranch Amount	El Dorado Ranch Per Acre	El Dorado Ranch Amount	El Dorado Ranch Per Acre	Pending (Sierra Crest) Property Amount	Pending (Sierra Crest) Property Per Acre	Cronan Ranch Amount	Cronan Ranch Per Acre	Current Estimate: Sierra Hills Area Per Acre
Acres	1,059		1,080		10,000		**NA**		
Land Acquisitions	**2013$**		**2014$**		**2015$**			**2001$**	
Purchase Price	$4,800,000		$4,995,000		$10,230,000		**NA**		
Other Costs	N/A		$205,000	[1]					
Subtotal Land Acquisitions	**$4,800,000**	**$4,533**	**$5,200,000**	**$4,815**	**$10,230,000**	**$1,023**	**NA**	**$6,107**	**$5,000**
Average Applied in This Analysis [2]									**$5,400**

Prepared by New Economics & Advisory, June 2016.

Source: ARC Staff, June 2015.

[1] Amount represents a donation made by the seller.

[2] A weighted average calculation would not be appropriate for ARC because a large recent purchase was made that would skew the result. Therefore, New Economics applied a straight average calculation to derive an average for this organization. Figure rounded to nearest hundred dollars.

A2.2 American River Conservancy Recent Conservation Easements
2001$

Item	Garibaldi Ranch Amount	Garibaldi Ranch Per Acre	Current Estimate of CE as a % of Acq. Price
Acres	1,178		
Conservation Easements	**2001$**		
Purchase Price	$1,767,123		
Other Costs (Cont. to Endowment)	$100,000	*CE*	
Subtotal Conservation Easements	**$1,867,123**	**$1,585**	50% [1]
Value Used in This Analysis			

Prepared by New Economics & Advisory, June 2016.

Source: ARC staff, June 2015.

[1] ARC staff reports that CEs typically cost about half as much as direct acquisition. The CE value should be associated with the value of grazing and/or tree harvesting, which is much lower than 50% and would result in a CE that is around 75-80% of gross land value. However, many CE parcels are less desirable to begin with or have development restrictions already, thus lowering the overall value.

A2.3 ARC M&M Costs
2016$

Expenditure	Cost per Acre [1]
Management & Monitoring	**$40.00**

Prepared by New Economics & Advisory, April 2016.
[1] Range of $35-40 per acre provided by ARC staff. Reflects average cost for undeveloped oak woodland of a ranch size (1,000 acres+) and includes 15-20% overhead costs. Actual M&M costs vary and can be more expensive for smaller properties and/or properties that are in urban areas and/or have recreational access. Cost range expressed in 2015$; because the incremental increase to reflect 2016$ is not enough to increase the amount remains the same.
Source: ARC staff, June 2015.

A3.1 *Placer Land Trust Recent Property Acquisitions*
2010-2012 (Nominal Dollars)

	Outman Big Hill		Bruin Ranch/Harvego	
Expenditure	Amount	Per Acre	Amount	Per Acre
Recent Land Acquisitions	**2012$**		**2010$**	
Acres	80		1,773	1,853
Purchase Price	$475,000	$5,938	$9,500,000	$5,358
Legal Fees	$1,100	$14	N/A	N/A
Appraisal	$5,303	$66	N/A	N/A
Title Insurance & Escrow Fees	$684	$9	$1,482	$1
Staff & Admin	$10,363	$130	$250,482	$141
Subtotal Recent Land Acquisitions	$492,450	$6,156	$9,751,964	$5,500
Rounded Weighted Average Recent Land Acquisitions				**$5,500**
Stewardship Fund Contribution			**2010$**	
Acres			1,773	
Stewardship Contribution			$500,000	
Subtotal Stewardship			**$500,000**	**$282**
Endowment Contribution			**2010$**	
Acres			1,773	
Endowment Contribution			$25,000	
Legal Funds			N/A	
Subtotal Endowment			**$25,000**	**$14**

Prepared by New Economics & Advisory, June 2016.
Source: Placer Land Trust staff, April-May 2015.

A3.2 *Placer Land Trust Recent Conservation Easements & Contributions*

2008-2015 (Nominal Dollars)

Expenditure	Miner's Ravine Preserve Amount	Miner's Ravine Preserve Per Acre	Oest Ranch Lake Clementine Preserve Amount	Oest Ranch Lake Clementine Preserve Per Acre	Oest Ranch Cold Springs Preserve Amount	Oest Ranch Cold Springs Preserve Per Acre	Big Gun Preserve [1] Amount	Big Gun Preserve [1] Per Acre	Wakamatsu Tea & Silk Colony Amount	Wakamatsu Tea & Silk Colony Per Acre	Rounded Weighted Avg
Acres	26		350		158		52		272		
Conservation Easements											
Purchase Price	$0 [2]		$894,542		$405,458		$0 [2]		$0 [2]		
Other Costs	$0		N/A		N/A		$30,000 [3]		$15,000	$55	
Subtotal Conservation Easements	$0	$0	$894,542	$2,556	$405,458	$2,566	$30,000	$577	$15,000	$55	**$1,600** [4]
Stewardship Fund Contribution [5]											
Stewardship Contribution	$200,000		$194,542		$105,458		$5,000 [6]				
Subtotal Stewardship	$200,000	$7,692	$194,542	$556	$105,458	$667	$5,000	$96			
Rounded Weighted Average								$4,200			
Total Cost	**$200,000**	**$7,692**	**$1,089,084**	**$3,112**	**$510,916**	**$3,234**	**$663,308**	**$12,756**	**$15,000**	**$55**	
Endowment Contribution											
Endowment Contribution							$598,308 [7]				
Legal Funds							$30,000 [8]				
Subtotal Endowment							**$628,308**	**$12,083**			
Average Conservation Easement as a % of Average Acquisition										**29%**	

Prepared by New Economics & Advisory, June 2016.

Source: Placer Land Trust staff, April-May 2015.

[1] Westervelt Ecological Services (WES) is the land owner of this preserve and PLT is the conservation easement holder and fiscal agent.

[2] Donated.

[3] Includes $15,000 for legal expenses and $15,000 for mitigation contract.

[4] Weighted average includes donated properties.

[5] The Stewardship fund is utilized similarly as an Endowment Fund (to fund long-term M&M) but is not technically restricted in the same manner as an Endowment Fund. However, this price is included in the total "cost" of acquisition because the purchase price was, in most cases, reduced to allow for the contribution to the Stewardship Fund.

[6] PLT receives $5,000 per year until the endowment is fully funded. Total expected amount is unknown at this time.

[7] PLT will receive this endowment when fully funded once credits are sold. This is expected to take several years because this contribution is a factor of income associated with the sale of credits. It is excluded from the total acquisition cost figure.

[8] PLT received $15,000 for legal defense and $15,000 to enter into mitigation contract with WES.

A3.3 *Placer Land Trust Estimated M&M costs*

2016$

Expenditure	Total Cost	Metric	Acres	Cost Per Acre
Annual Management & Monitoring Examples (2013$)				
Outman Preserve	$2,375	For entire property.	80	$29.69
Harvego Reserve/Bruin Ranch	$60,000	Annual M&M estimate.	1,773	$33.84
Wakamatsu Tea & Silk Colony	$10,000	Annual M&M estimate.	272	$36.76
Big Gun Preserve	$2,500	$2,000 -$3,000 annually.	52	$48.08
Weighted Average Cost				**$34.39**
Other Annual Costs (2013$)				
Overhead	15%	Typically applied to M&M contract costs. Applied to M&M Weighted Average Cost.		$5.16
Field Equipment	$5,000	Per year for Harvego Reserve.	1,773	$2.82
Periodic Surveys, Aerial Photos	N/A	Not specifically performed yet on Oak Woodland properties.		N/A
Subtotal Other Annual Costs				**$7.98**
Subtotal Annual Management & Monitoring (2013$)				**$42.37**
Inflated to 2016$				**$51.08**

Prepared by New Economics & Advisory, June 2016.
Source: PLT Staff, April - June 2015.

A4 Placer County Conservation Plan (PCCP) Projected Costs
2016$

Expenditure	Amount	Metric	Cost Per Acre
One-Time Activities (Year 0) (2013$) [1]			
County Field Facilities Contribution [2]	$500,000	Spread over 48,250 acres at end of 50-years.	$10.36
Oak Woodland Fuel Management	$1,800	Initial One-Time Cost per acre.	$1,800.00
Maintaining New Plantings [3]	$20,000	per 100-acre project over a 3-yr. period	$200.00
Subtotal One-Time Activities			**$2,010.36**
Inflated to 2016$			**$2,423.61**
Annual Management & Monitoring (2013$)			
Mgmt. Equip. & Materials	$3,000	Cost per 1,000 acres.	$3.00
On-going Site Maintenance	$10,000	Cost per 1,000 acres.	$10.00
Wildlife Management	$1,000	Cost per 1,000 acres.	$1.00
Oak Woodland Fuel Management	$1,000	Interval treatment every 5 years ($1,000 every 5 years per 1,000 acres).	$0.20
Field Facilities Maint. & Utilities	$10,000	Annual cost spread over 48,250 acres.	$0.21
Staffing Cost	$50,000	(1/3-1/2 time position)	$1.04
Reserve Mgmt. Plan Updates	$40,000	Every 5 years (2 total plans)	$0.17
Subtotal Annual Management & Monitoring			**$15.61**
Inflated to 2016$			**$18.82**
Other Data Points			
Case Study Restoration Costs [3]	$43,000	per 100-acre project	$430.00
Total Estimated Cost over 50-yr permit period		Cost estimate ranges from $3,000 to $30,000 per acre	$13,500

Prepared by New Economics & Advisory, June 2016.

Source: Woodland Restoration Potential: Placer County Conservation Plan, Richard R. Harris, Ph.D., February 2013.

[1] Reflects cost of one-time activities conducted shortly after undertaking management and monitoring responsibilities.

[2] This estimated cost is currently anticipated by Placer County for purposes of developing the Placer County Conservation Plan (PCCP). New Economics has integrated this cost into Initial M&M.

[3] From Attachment A of PPCP Woodland Restoration Report. Estimated Oak Woodland Restoration Notes by Riley Swift.

A5.1 *Sempervirens Fund Recent Acquisitions*
2012-2014 (Nominal Dollars)

Expenditure	Amount	Acres	Cost per Acre
Recent Land Acquisitions	2012		
Gallaway	$378,000	89	$4,247
	2013		
Butano & Waterman Creek	$870,000	80	$10,875
Lachnbrauch	$500,000	76	$6,579
Redwood Meadows	$525,000	151	$3,477
	2014		
Van Kempen	$650,000	33	$19,697
Weighted Average Acquisitions			**$6,814**
Related Acquisition Costs [1]	$838,885	429	$2,073
Subtotal Recent Land Acquisitions			**$8,886**
Recent Conservation Easements	**2013$**		
Redwood Meadows	$525,000	151	$3,477
Average Conservation Easement as a % of Average Acquisition [2]			**56%**

Prepared by New Economics & Advisory, June 2016.
Source: Sempervirens Fund Audited Financial Statements, June 30, 2014, and staff.
[1] Reflects 70% of General and Administration Costs from Financial Statement spread across 398 acres acquired in the same year to determine per-acre amount.
[2] Reflects 2013$ land acquisitions and conservation easements.

A5.2 *Sempervirens Fund M&M Trends*

2016$

Expenditure	Financial Statement Ending 06/30/2014 Stewardship	Total General & Admin	General & Admin Portion [1]	Total Cost	Metric	Cost per Acre [2]
Annual Management & Monitoring (2014$)						
Salaries	$99,223	$219,309	$65,793	$165,016	Lump Sum	$15.40
Payroll Taxes & Benefits	$20,552	$43,097	$12,929	$33,481	Lump Sum	$3.13
Other Outside Services	$86,039	$21,957	$6,587	$92,626	Lump Sum	$8.65
IT Services	$4,509	$11,070	$3,321	$7,830	Lump Sum	$0.73
Office Expenses	$5,622	$16,823	$5,047	$10,669	Lump Sum	$1.00
Occupancy Expenses	$16,037	$35,763	$10,729	$26,766	Lump Sum	$2.50
Printing, Postage & Direct Mail	$2,323	$12,418	$3,725	$6,048	Lump Sum	$0.56
Legal and Accounting	$1,273	$36,121	$10,836	$12,109	Lump Sum	$1.13
Insurance	$808	$26,381	$7,914	$8,722	Lump Sum	$0.81
Travel, Training, Meetings & Ent.	$5,788	$16,771	$5,031	$10,819	Lump Sum	$1.01
Government Fees	$183	$549	$165	$348	Lump Sum	$0.03
Subtotal Annual Management & Monitoring						**$34.95**
Inflated to 2016$						**$41.19**

Prepared by New Economics & Advisory, June 2016.

[1] Stewardship Costs account for approximately 30% of Total Annual Costs (net of Admin). This analysis applies 30% of General and Administrative costs as a preliminary estimate of proportionate administrative costs. Subject to further refinement.

[2] Costs are spread over 10,713 acres of redwood forests and forest land actively managed by Sempervirens.

Source: Sempervirens Fund Audited Financial Statements, June 30, 2014, and staff.

A6 *Sacramento Tree Foundation M&M Trends*
2016$

Expenditure	Financial Statement Ending 06/30/2013 Mitigation Amount	Total Gen. & Admin.	Adj. Gen. & Admin. [1]	Total Cost	Metric	Cost per Acre [2]
Annual Management & Monitoring (2013$)						
Trees, Materials & Land Use Fees	$6,140	$2,116	$275	$6,415	Lump Sum	$214
Salaries, Benefits & Taxes	$193,847	$141,376	$18,379	$212,226	Lump Sum	$7,074
Professional Services	$3,132	$21,427	$2,786	$5,918	Lump Sum	$197
Marketing	$220	$2,550	$332	$552	Lump Sum	$18
Rent & Utilities	$11,513	$25,602	$3,328	$14,841	Lump Sum	$495
Vehicles	$15,787	$159	$21	$15,808	Lump Sum	$527
Depreciation	$7,087	$5,169	$672	$7,759	Lump Sum	$259
Computer Services	$1,433	$2,577	$335	$1,768	Lump Sum	$59
Equipment Costs	$6,061	$5,179	$673	$6,734	Lump Sum	$224
Postage, Freight & Printing	$923	$2,408	$313	$1,236	Lump Sum	$41
Meeting & Conferences	$570	$10,970	$1,426	$1,996	Lump Sum	$67
Insurance	$856	$640	$83	$939	Lump Sum	$31
Office Supplies	$638	$930	$121	$759	Lump Sum	$25
Staff Development	$840	$3,028	$394	$1,234	Lump Sum	$41
Miscellaneous	$551	$1,920	$250	$801	Lump Sum	$27
Subtotal Annual Management & Monitoring				**$226,051**		**$9,299**
Inflated to 2016$						**$11,211**

Prepared by New Economics & Advisory, June 2016.

[1] Amount includes Mitigation Program Costs and 13% of Administrative Costs as a preliminary estimate of proportionate administrative costs. Subject to further refinement.

[2] In 2014, STF planted and cared for 4,450 trees. At about 150 trees per acre, STF estimates 30 acres of land under management.

Source: Sacramento Tree Foundation Financial Statements, June 30, 2013.

A7.1 *Sierra Foothill Conservancy Recent Direct Land Acquisitions*
2012 (Nominal Dollars)

Item	Martin Preserve Amount [1]	Martin Preserve Amount per Acre	Miller Preserve Amount	Miller Preserve Amount per Acre
Recent Land Acquisitions	**2012$**		**2012$**	
Acres	280		2,011	**2,291**
Purchase Price	$1,021,100	$3,647	$1,230,000	$612
Subtotal Recent Land Acquisitions		**$3,647**		**$612**
Weighted Average Recent Land Acquisitions				**$1,000**

Prepared by New Economics & Advisory, June 2016.

Sources: Consolidated Financial Statements and Additional Information for FY 2012/13 and 2011/12, and Sierra Foothill Conservancy staff.

[1] This transaction also include $280,507 in Stewardship Fund contribution; however, this amount is excluded because it is intended to fund M&M.

A7.2 SFC - Recent Easements & Contributions
2008-2014 (Nominal Dollars)

Item	2008-2014 Amount	Acres	Per Acre
Conservation Easements (CE)		*2008*	
Bohna	$1,000,000	840	$1,190
Trabucco	$300,000	524	$573
		2012	
San Joaquin River Corridor	$820,000	1,390	$590
Wild Life Conservation Board	$280,000	680	$412
		2010	
Millar Ranch	$1,850,000	2,990	$619
		2011	
Pt. Millerton Ranch	$125,000	200	$625
		2014	
Hendrick	$440,000	324	$1,358
		2012$	
Martin Preserve-- Stewardship Fund Contribution Only	$280,507	280	$1,002
Rounded Weighted Average Recent CE Cost			**$700**
Average Conservation Easement as a % of Average Acquisition [1]			**70%**

Prepared by New Economics & Advisory, June 2016.
[1] Based on 2013$ land acquisitions and rounded weighted average of conservation easements (2008-2014).
Sources: Consolidated Financial Statements and Additional Information for FY 2012/13; and Sierra Foothill Conservancy staff, May 2015.

A7.3 *Sierra Foothill Conservancy M&M Trends*

2016$

Expenditure	Financial Statement Ending 06/30/2013 Program Services	General & Admin.	Total Cost [1]	Metric	Cost per Acre [2]
Management & Maintenance (2013$)					
Management Fee	N/A	$27,635	$27,635	Lump Sum	$4.26
Outside Services	$62,699	N/A	$62,699	Lump Sum	$9.67
Repairs & Maintenance	N/A	$19,842	$19,842	Lump Sum	$3.06
Salaries & Wages	$228,654	$55,619	$284,273	Lump Sum	$43.86
Payroll Taxes	$22,177	$5,394	$27,571	Lump Sum	$4.25
Employee Benefits	$5,304	$1,290	$6,594	Lump Sum	$1.02
Advertising & Promotions	N/A	$942	$942	Lump Sum	$0.15
Auto Expenses	$12,325	$8,084	$20,409	Lump Sum	$3.15
Bank & Finance Charges	N/A	$1,936	$1,936	Lump Sum	$0.30
Conference Expenses	$422	$3,603	$4,025	Lump Sum	$0.62
Dues & Subscriptions	N/A	$6,373	$6,373	Lump Sum	$0.98
Insurance	$3,775	$24,198	$27,973	Lump Sum	$4.32
Interest	N/A	$20,179	$20,179	Lump Sum	$3.11
Loss on Disposition of Assets	N/A	$4,979	$4,979	Lump Sum	$0.77
Member Events	$1,242	N/A	$1,242	Lump Sum	$0.19
Miscellaneous	$260	$3,517	$3,777	Lump Sum	$0.58
Office Expenses	$4,004	$6,369	$10,373	Lump Sum	$1.60
Postage & Delivery	$282	$1,314	$1,596	Lump Sum	$0.25
Printing & Copying	$3,315	$863	$4,178	Lump Sum	$0.64
Professional Fees	$30,634	$8,459	$39,093	Lump Sum	$6.03
Property Taxes	$9,282	N/A	$9,282	Lump Sum	$1.43
Rent & Related	$15,226	$3,704	$18,930	Lump Sum	$2.92
Taxes & Licenses	N/A	$232	$232	Lump Sum	$0.04
Travel	$964	$2,322	$3,286	Lump Sum	$0.51
Utilities	$13,288	$3,232	$16,520	Lump Sum	$2.55
Subtotal Management & Monitoring			**$623,939**		**$96.27**
Inflated to 2016$					**$116.06**

Prepared by New Economics & Advisory, June 2016.

[1] Figures include costs associated with Program Services and General & Administration.

[2] SFC actively manages only the land owned in fee title. Costs are spread over 6,481 acres of nature preserves actively managed by SFC.

Source: Consolidated Financial Statements and Additional Information for FY 2012/13 and 2011/12, and SFC staff.

A8.1 *Save the Redwoods League Recent Acquisitions*
2012-2014 (Nominal Dollars)

Expenditure	Amount	Cost per Acre	Amount	Cost per Acre
Recent Land Acquisitions	**2013$**		**2014$**	
Acres	125		33	**158**
Purchase Price	$2,000,000	$16,000	$650,000	$19,697
Weighted Average Cost				**$16,772**
Recent Conservation Easements (CE)	**2014$**		**2012$**	
Acres	22,986		378	
Purchase Price	$16,900,000	$735	$300,000 [1]	$794
Appraisals & Environmental [2]	$364,362	$16	$310,745	$822
Legal Fees [2]	$16,435	$1	$113,511	$300
Subtotal CE Acquisition		**$752**		**$1,916**
Weighted Average Cost				**$771**
Average Conservation Easement as a % of Average Acquisition Cost				**5%**

Prepared by New Economics & Advisory, June 2016.

[1] Donation.

[2] New Economics assumed that these costs, included in both Program Services and General and Administrative Cost categories were predominantly associated with acquisition activities. Subject to further refinement pending additional feedback from SRL staff.

Sources: Save the Redwoods League Financial Statements, March 31, 2014 and 2013; Save the Redwoods League 2014 Annual Report, and Save the Redwoods League staff.

A8.2 *Save the Redwoods League M&M Trends*

2016$

Expenditure	Financial Statements 03/14/2014 Program Services	Total General & Admin	Adjusted General & Admin [1]	Total Cost [1]	Metric	Cost per Acre [2]
Management & Monitoring (2014$)						
Other Project Costs	$353,504		N/A	$353,504	Lump Sum	$24.46
Equip. Rental & Maint.	$7,094	$6,743	$4,720	$11,814	Lump Sum	$0.82
Salaries & Benefits	$1,658,517	$837,483	$586,238	$2,244,755	Lump Sum	$155.30
Payroll taxes	$103,922	$52,476	$36,733	$140,655	Lump Sum	$9.73
Printing & Publications	$121,945	$11,909	$8,336	$130,281	Lump Sum	$9.01
Services & Fees	$110,183	$299,548	$209,684	$319,867	Lump Sum	$22.13
Occupancy	$168,770	$92,539	$64,777	$233,547	Lump Sum	$16.16
Consultants	$240,281	N/A	N/A	$240,281	Lump Sum	$16.62
Conferences and Meetin	$53,657	$43,430	$30,401	$84,058	Lump Sum	$5.82
Travel	$62,009	$25,189	$17,632	$79,641	Lump Sum	$5.51
Investment Fees	N/A	$137,153	$96,007	$0	Lump Sum	$0.00
Miscellaneous Expenses	$29,746	$30,665	$21,466	$51,212	Lump Sum	$3.54
Accounting Fees	N/A	$49,715	$34,801	$34,801	Lump Sum	$2.41
Postage & Shipping	$9,616	$21,297	$14,908	$24,524	Lump Sum	$1.70
Furniture & Equipment	$18,669	$10,980	$7,686	$26,355	Lump Sum	$1.82
Insurance	$18,867	$10,345	$7,242	$26,109	Lump Sum	$1.81
Supplies	$15,822	$6,206	$4,344	$20,166	Lump Sum	$1.40
Telephone	$12,482	$7,627	$5,339	$17,821	Lump Sum	$1.23
Subtotal Management & Monitoring						**$279.47**
Inflated to 2016$						**$314.96**

Prepared by New Economics & Advisory, June 2016.

[1] Amount includes Program Services Costs and 70% of General and Administrative Costs as a preliminary estimate of proportionate administrative costs. Subject to further refinement.

[2] Cost are spread over 14,454 acres of forests and surrounding land actively managed by SRL.

Source: Save the Redwoods League Financial Statements, March 31, 2014; Save the Redwoods League 2014 Annual Report; and SRL staff.

A9.1 *Sacramento Valley Conservancy Recent Acquisitions*
Deer Creek Hills (2003$)

Expenditure	Amount	Cost per Acre
Recent Land Acquisition	**2003$**	
Acres [1]	4,062	
Acquisition Costs	$11,422,400	$2,812
Subtotal Recent Land Acquisition	**$11,422,400**	**$2,812**

Prepared by New Economics & Advisory, June 2016.
[1] Owned and managed acres per Deer Creek Hills Preserves Master Plan, July 2008.
Source: Deer Creek Hills Preserve Master Plan, 2008; SVC website; and SVC staff.

A9.2 Sacramento Valley Conservancy M&M Trends
Deer Creek Hills, 2016$

Expenditure	Amount	Metric	Cost per Acre [1]
Annual Management & Monitoring (2013$)			
Property Tax & Management Costs [2]	$55,844	Lump Sum	$13.75
Payroll	$50,986	Lump Sum	$12.55
Payroll Taxes	$3,890	Lump Sum	$0.96
Employee Benefits	$71	Lump Sum	$0.02
Travel & Meetings	$735	Lump Sum	$0.18
Occupancy	$1,012	Lump Sum	$0.25
Postage & Delivery	$31	Lump Sum	$0.01
Phone & Internet	$3,118	Lump Sum	$0.77
Office Expense	$195	Lump Sum	$0.05
Payroll Services	$838	Lump Sum	$0.21
Insurance	$7,552	Lump Sum	$1.86
Taxes & Licenses	$1,213	Lump Sum	$0.30
General Admin Overhead [3]	$29,435	Lump Sum	$7.25
Subtotal Administrative Expenses	**$154,922**		**$38.14**
Inflated to 2016$			**$39.97**

Prepared by New Economics & Advisory, June 2016.

[1] Costs are spread over 4,062 acres of Deer Creek Hills Preserve actively managed by SVC.

[2] Includes weed management, trash management, grazing management, property repairs, management licensing agreements, and training.

[3] General overhead and administrative cost estimated at 19% of overall budget per SVC staff.

Source: Deer Creek Hills Preserve Master Plan, 2008; and Sacramento Valley Conservancy staff, May 2015.

Appendix B: Supporting Calculations for Endowment Fee Component

B1 Endowment Fund Annual Rate of Return Research
Nominal Rates

Item	Year	Source	Rate of Return
National Association of College and University Business Officers (NACUBO) (Net Return) [1]			
Endowments Under $25 Million	2009		3.90%
Endowments Under $25 Million	2010		2.80%
Endowments Under $25 Million	2011		4.90%
Endowments Under $25 Million	2012		5.70%
	Average		**4.33%**
Other Habitat Fee Studies (Nominal Rates)			
Natomas Basin Conservancy	2013	EPS/ NBC	3.00%
Santa Clara Valley Habitat Plan Development Fee Nexus Study	2012	Willdan	3.25%
El Dorado Oak Woodland	2008	El Dorado County	6.00%
El Dorado County Ecological Preserve Fee Estimate	1998	EPS	6.00%
	Average		**4.56%**

Prepared by New Economics & Advisory, June 2016.

[1] NACUBO 10-year total net return for US Higher Education endowments and Affiliated Foundations, for Endowments under $25 million.

Sources: Individual Habitat Management Organizations, Fee Nexus Studies, and NACUBO Common Fund Study of Endowments 2009-2012.

B2 *Endowment Cash Flow Projections (2016$ constant dollars)*

6.0% annually

Item	Assumption	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Habitat Acres Maintained		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Annual Maintenance Cost	$43 per acre	$43	$43	$43	$43	$43	$43	$43	$43	$43	$43
Portion Prepaid by Initial M&M Fee Component [1]		$43	$43	$43	$43	$43	$0	$0	$0	$0	$0
Remaining Annual Maintenance Cost	$43 per acre	$0	$0	$0	$0	$0	$43	$43	$43	$43	$43
Endowment Fund											
Opening Balance		$0	$550	$583	$618	$655	$694	$693	$692	$691	$690
Interest Earnings [2]	6.0% annually	$0	$33	$35	$37	$39	$42	$42	$42	$41	$41
New Fee Revenue Available	$550 per acre	$550	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Balance		$550	$583	$618	$655	$694	$736	$735	$734	$733	$731
Amount Applied Toward O&M Cost		$0	$0	$0	$0	$0	$43	$43	$43	$43	$43
Closing Balance		$550	$583	$618	$655	$694	$693	$692	$691	$690	$689

Prepared by New Economics & Advisory, June 2016.

[1] This amount is to be provided by developers up-front to fund 5 years of maintenance.

[2] Interest earnings are applied to previous year's ending balance.

B3 *Endowment Cash Flow Projections (2016$ constant dollars)*

3.0% annually

Item	Assumption	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Habitat Acres Maintained		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Annual Maintenance Cost	$43 per acre	$43	$43	$43	$43	$43	$43	$43	$43	$43	$43
Portion Prepaid by Initial M&M Fee Component [1]		$43	$43	$43	$43	$43	$0	$0	$0	$0	$0
Remaining Annual Maintenance Cost	$43 per acre	$0	$0	$0	$0	$0	$43	$43	$43	$43	$43
Endowment Fund											
Opening Balance		$0	$1,250	$1,288	$1,326	$1,366	$1,407	$1,406	$1,406	$1,406	$1,405
Interest Earnings [2]	3.0% annually	$0	$38	$39	$40	$41	$42	$42	$42	$42	$42
New Fee Revenue Available	$1,250 per acre	$1,250	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Balance		$1,250	$1,288	$1,326	$1,366	$1,407	$1,449	$1,449	$1,448	$1,448	$1,447
Amount Applied Toward O&M Cost		$0	$0	$0	$0	$0	$43	$43	$43	$43	$43
Closing Balance		$1,250	$1,288	$1,326	$1,366	$1,407	$1,406	$1,406	$1,406	$1,405	$1,405

Prepared by New Economics & Advisory, June 2016.

[1] This amount is to be provided by developers up-front to fund 5 years of maintenance.

[2] Interest earnings are applied to previous year's ending balance.

Appendix C: Bibliography

Bibliography

- American River Conservancy website. 2015. www.arconservancy.org. Accessed May 2015 through June 2015. Staff interview and emails, Alan Ehrgott, June 2015.
- BAE Urban Economics. 2013. *Memorandum to Shawn Purvines, County of El Dorado, Re: 2035 Growth Projections, March 14, 2013*, Table 1: Baseline Conditions, West Slope, Less City of Placerville; Table 2: Projected Residential Growth Rates, 2010 to 2035; Table 5: Projected New Jobs by Market Area, 2010-2035.
- Burr Pilger Mayer, Inc. 2014. *Save The Redwoods League Financial Statements, March 31, 2014 and 2013.*
- Burr Pilger Mayer, Inc. 2014. *Sempervirens Fund Audited Financial Statements for the year ended June 30, 2014 (with summarized comparative totals for June 30, 2013)*.
- California Council of Land Trusts website. 2015. www.calландtrust.org. Accessed January 2015. Staff interview, Darla Guenzler, Ph.D., Executive Director.
- Center for Natural Lands Management website. 2015. www.cnlm.org. Accessed January 2015.
- Cheryl Langley, Shingle Springs Resident. 2015. *Letter to Board of Supervisors, Subject: Biological Resources Workshop of January 26, 2015*; File# 12-1203; Agenda Item# 2, January 23, 2015.
- Conservation Lands Foundation website. 2015. www.conservationlands.org. Accessed January 2015. Staff interview, Dan Goldman, January 2015.
- Dudek. 2015. *Memorandum to Shawna Purvines*, El Dorado County, February 17, 2015.
- Dudek. 2013. *Memorandum to Shawna Purvines, Principal Planner, El Dorado County, March 14, 2013.*
- Dudek. 2015. *Staff emails Re: Oak Resources In-Lieu Fee Status Update*, Scott Eckardt, June 3, 2015 through June 4, 2015.
- Dudek. 2016. *Staff email Re: Updated IOT Maintenance Cost*, April 7, 2016.
- El Dorado County Board of Supervisors. 1998. *Resolution No. 205-98.*
- El Dorado County Development Services Department – Planning Services. 2008. *El Dorado County Oak Woodland Management Plan, April 2008, Planning Commission Recommended Version.*
- El Dorado County. 1998. *Ecological Preserves, Ordinance No. 4500, Chapter 17.71.*
- El Dorado County. 2008. *Oak Woodland Conservation Ordinance, Chapter 17.72, Oak Woodland Conservation.*
- El Dorado County. 2013. *El Dorado County General Plan 2013-2021 Housing Element*, Adopted October 29, 2013 by Resolution #161-2013.
- El Dorado County. 2015. *Oak Resources Management Plan*, prepared by Dudek, June 2016.
- Land Trust Alliance website. 2015. www.landtrustalliance.org. Accessed, January 2015 through June 2015.

- National Association of College and University Business Officers and Commonfund Institute. 2009 – 2012. *NACUBO-Commonfund Study of Endowments.*
- Placer County Conservation Plan Committee. 2013. *Recommendations of the Committee Appointed to Evaluate Oak Woodland Enhancement and Restoration Placer County Conservation Plan December 18, 2013.*
- Placer County Planning Services Division. 2015. *www.placer.ca.gov/Departments/CommunityDevelopment/planning/PCCP.aspx.* Accessed January 2015 through June 2015. Staff interviews and emails, Jennifer Byous and Kelly Kedinger-Cecil, June 2015.
- Placer County. 2013. *The Placer County Conservation Plan: A Proposal for Balancing Growth and Resources Protection.*
- Placer Land Trust website. 2015. *www.placerlandtrust.org.* Accessed January 2015 through June 2015. Staff interview and emails, Jeff Ward and Jessica Daugherty, January 2015 through June 2015.
- Price Paige & Company Accountancy Corporation. 2013. *Sierra Foothill Conservancy (a Non-Profit Organization) Consolidated Financial Statements and Additional Information For the Year Ended June 30, 2013 and 2012.*
- Richard R. Harris, Ph.D., Placer County Conservation Plan Committee Chair. 2013. *Letter to Loren Clark, Assistant Planning Director, Placer County Planning Department*, December 18, 2013.
- Sacramento Area Council Of Governments. 2010. *MTP/SCS 2035 Update, Appendix E-3 Land use Forecast Background Documentation*, 2020 and 2035 MTP/SCS land Use Forecast by Community Type and Jurisdiction, June 25, 2010.
- Sacramento Tree Foundation website. 2015. *www.sactree.com.* Accessed January 2015 though June 2015. Staff interview and email, Erika Tech, January 2015 through June 2015.
- Sacramento Tree Foundation. 2011. *Budget Template for Native Tree Mitigation*, provided by Sacramento Tree Foundation staff, Erika Teach, March 19, 2015.
- Sacramento Valley Conservancy website. 2015. www.sacramentovalleyconservancy.org. Accessed January 2015 through June 2015. Staff interview and emails, Aimee Rutledge, January 2015 through June 2015.
- Sacramento Valley Conservancy. 2003. *Deer Creek Hills Preserve Master Plan.*
- Sacramento Valley Conservancy. 2010. *Statement of Income and Expense – Deer Creek Hills Preserve*, provided by Sacramento Valley Conservancy Staff, Aimee Rutledge, March 2015.
- Sacramento Valley Conservancy. 2011. *Statement of Income and Expense – Deer Creek Hills Preserve*, provided by Sacramento Valley Conservancy Staff, Aimee Rutledge, March 2015.
- Sacramento Valley Conservancy. 2012. *Statement of Income and Expense – Deer Creek Hills Preserve*, provided by Sacramento Valley Conservancy Staff, Aimee Rutledge, March 2015.

- Sacramento Valley Conservancy. 2013. *Statement of Income and Expense – Deer Creek Hills Preserve*, provided by Sacramento Valley Conservancy Staff, Aimee Rutledge, March 2015.
- Save the Redwoods League website. 2015. *www.savetheredwoods.org*. Accessed January 2015 through June 2015. Staff interview and emails, Jessica Neff and Harry Pollack, January 2015 through June 2015.
- Save The Redwoods League. 2014. *Annual Report*.
- Sempervirens Funds website. 2015. *www.sempervirens.org*. Accessed January 2015 through June 2015. Staff interview and emails, Patrick Gibbons, January 2015 through June 2015.
- Sequoia Riverlands Trust website. 2015. *www.sequoiariverlands.org*. Accessed January 2015 through June 2015. Staff interview and emails, Hilary Dustin, January 2015 through June 2015.
- Sierra Foothills Conservancy website. 2015. *www.sierrafoothill.org*. Accessed January 2015 through June 2015. Staff interview and emails, Lauren Hubert, January 2015 through 2015.
- Santa Clara County. 2009. *Memorandum from Sylvia M. Gallegos, Deputy County Executive, to County of Santa Clara Finance and Government Operations Committee, Re: Reporting Concerning Costs and Revenues of the Valley Habitat Plan*, December 17, 2009.
- The Trust for Public Land website. 2015. *www.tpl.org*. Accessed January 2015, Staff interview, Shelby Semmes January 2015.
- Williams & Olds, Certified Public Accountants. 2013. *Financial Statements and Report of Independent Certified Public Accountants, Sacramento Tree Foundation, June 30, 2013*.

Appendix C

General Plan Goals, Objectives, Policies and Measures Applicable to the Oak Resources Management Plan

This page intentionally left blank.

MEASURE CO-P

Develop and adopt an Oak Resources Management Plan. The plan shall address the following:

- Mitigation standards for oak resources impacts;
- Definitions of exempt projects and actions;
- Technical report requirements;
- Oak resources mitigation options and standards;
- Heritage Tree mitigation standards; and
- Oak resources mitigation monitoring and reporting requirements.

[Policy 7.4.4.4]

Responsibility:	Planning Department
Time Frame:	Concurrent with biological resources policy update.

GOAL 7.4: WILDLIFE AND VEGETATION RESOURCES

Identify, conserve, and manage wildlife, wildlife habitat, fisheries, and vegetation resources of significant biological, ecological, and recreational value.

OBJECTIVE 7.4.4: FOREST,OAK WOODLAND, AND TREE RESOURCES

Protect and conserve forest, oak woodland, and tree resources for their wildlife habitat, recreation, water production, domestic livestock grazing, production of a sustainable flow of wood products, and aesthetic values.

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.

The ORMP identifies standards for oak woodland and native oak tree impact determination, mechanisms to mitigate oak woodland and native oak tree impacts, technical report submittal requirements, minimum qualifications for technical report preparation, mitigation monitoring and reporting requirements, and projects or actions that are exempt from this policy. The ORMP also establishes an in-lieu fee payment option for impacts to oak woodlands and native oak trees, identifies Priority Conservation Areas (PCAs) where oak woodland conservation efforts may be focused, and outlines minimum standards for identification of oak woodland conservation areas outside the

PCAs. Requirements for monitoring and maintenance of conserved oak woodland areas and identification of allowable uses within conserved oak woodland areas are also included in the ORMP.

Appendix D

Best Management Practices for Oak Resources

This page intentionally left blank.

Appendix D
Best Management Practices for Oak Resources

Information on building around oaks and oaks in the home garden can be found in the University of California Division of Agriculture and Natural Resources' (UC ANR) leaflet, Living Among the Oaks. Additional information on disturbance around oaks and protecting trees from construction impacts can be found in the UC Cooperative Extension's (UCCE) handout, Disturbance Around Oaks (Frost 2001) and the California Department of Forestry and Fire Protection's (CAL FIRE) Tree Notes, Protecting Trees from Construction Impacts (Sanborn 1989). Information on the Care of California's Native Oaks is also available through the California Oak Foundation[1]. Qualified professionals and interested persons should contact the local El Dorado County UCCE Advisor and the UC ANR and other sources for the most recent research.

The following are general guidelines or best management practices for tree protection during construction activities, taken from some of the above sources:

- The root protection zone (RPZ) is roughly one-third larger than the drip line (or outermost edge of the foliage based on the longest branch).
- Install high visibility fencing around the RPZ of any tree or cluster of trees with overlapping canopy that are identified on an approved grading plan as needing protection. The fencing should be four-feet high and bright orange with steel t-posts spaced 8 feet apart.
- Do not grade, cut, fill or trench within the RPZ.
- Do not store oil, gasoline, chemicals, other construction materials, or equipment within the RPZ.
- Do not store soil within the RPZ.
- Do not allow concrete, plaster, or paint washout within the RPZ.
- Do not irrigate within the RPZ or allow irrigation to filter into the RPZ.
- Plant only drought tolerant species within the RPZ.

The following are general guidelines for protecting oak trees in gardens and yards.

- Avoid summer irrigation.
- Disturb the zone within six feet of the trunk as little as possible. The base of the tree should be kept dry.
- Limit plantings beneath oak trees to drought-tolerant species that do not require summer irrigation.
- Landscape beneath oak trees with non-living plant materials such as wood chips.

[1] Now a project of the California Wildlife Foundation (http://www.californiawildlifefoundation.org/projects.html)

- Refer to Living Among the Oaks or contact the El Dorado County Master Gardener Program (through the UCCE office) for more information on oaks in the home garden.

The County also identifies tree protection measures in its Design and Improvement Standards Manual (revised 1990), which includes the following:

- Do not change the amount of irrigation provided to any oak tree from that which was provided prior to the commencement of construction activity.
- Do not trench, grade, or pave into the dripline area of an oak tree.
- Do not park or operate any motor vehicle within the dripline area of any oak tree.
- Do not place or store any equipment or construction materials within the dripline of any oak tree.
- Do not attach any signs, ropes, cables, or any other items to any oak trees.
- Do not place or allow to flow into or over the dripline area of any oak tree any oil, fuel, concrete mix, or other deleterious material.
- Where construction activity is proposed within 50 feet of an oak tree:
    - A 6-foot tall temporary fence shall be placed the protected area prior to the work beginning.
    - No grade changes shall occur within the protected area unless specifically indicated in the plans.
    - No trenching shall be allowed within the protected area. If it is necessary to install underground utilities within the temporary fence, the utility trench shall be hand dug so as not to cut any roots over 2" in diameter, or a line may be bored and drilled.
    - Only dead, weakened, diseased, or dangerous branches shall be removed, and only by a licensed arborist. Any roots 2" in diameter or larger that must be cut shall be cleanly cut with pruning (not excavation) equipment.
    - Hose off all dust from foliage of oak trees once every week during the construction of the project.

Appendix E

Guidelines for Maintenance, Restoration, and Rehabilitation of Oak Resources

This page intentionally left blank.

Appendix E
Guidelines for Maintenance, Restoration, and Rehabilitation of Oak Resources

The following recommendations for the maintenance, restoration, and rehabilitation of oak woodlands are taken directly from Regenerating Rangeland Oaks in California, University of California Agriculture & Natural Resources Publication 21601 (McCreary, 2009). The documents How to Grow California Oaks and How to Collect, Store, and Plant Acorns have additional information. Qualified professionals and interested persons are encouraged to consult these resources and other current sources of information.

Recommended Acorn Collection and Storage Procedures

- Collect acorns in the fall, several weeks after the first ones have started to drop and when those remaining on the tree can be easily dislodged from the acorn cap by gentle twisting.
- If possible, collect acorns directly from the branches of trees, rather than from the ground.
- If acorns are collected from the ground, place them in a bucket of water for several hours, and discard floaters.
- Stratify acorns from the black oak group (e.g., black oak, interior live oak) by soaking them in water for 24 hours and then storing them in a cooler or refrigerator for 30 to 90 days before sowing.
- Store acorns in a cooler or refrigerator in loosely sealed plastic bags, but do not store acorns from the white oak group (e.g., valley oak, blue oak, Oregon white oak) for more than 1 or 2 months before planting to ensure greatest viability.
- If acorns start to germinate during storage, remove and plant them as soon as possible.
- If mold develops during storage, and acorns and radicles are discolored and slimy, discard acorns.

Recommended Methods for Sowing Acorns of Rangeland Oaks in the Field

- Sow acorns in the fall and early winter, as soon as soil has been moistened several inches down.
- If possible, pregerminate acorns before planting and outplant when radicles are ¼ inch to ½ inch (1/2 cm to 1 cm) long.
- Cover acorns with ½ to 1 inch (1 to 2 ½ cm) of soil.
- If acorn depredation is suspected as a serious problem (high populations of rodents are present), plant deeper, up to 2 inches (5cm).
- If acorns begin to germinate during storage, outplant as soon as possible with the radicle pointing down. Use a screwdriver or pencil to make a hole in the soil for the radicle.
- If radicles become too long, tangled, and unwieldy to permit planting, clip them back to ½ inch (1 cm) and outplant.

- If acorn planting spots have aboveground protection (treeshelters), and acorns have not been pregerminated, plant two or three acorns per planting spot and thin to the best seedling after 1 year.
- Keep planting pots free of weeds for at least 3 years after planting.

Recommended Procedure for Planting Rangeland Oaks

- Plant oak seedlings early in the growing season, soon after the first fall rains have saturated the soil; do not plant after early March unless irrigation is planned.
- Make sure seedlings are not frozen, allowed to dry out, or physically damaged before, during, or after planting.
- Plant seedlings at proper depth, making sure they are not J-rooted, and eliminate air pockets in soil adjacent to seedling roots
- In hard, compacted soils, break up soil (using a shovel, auger or posthole digger) through the compacted zone prior to planting to promote deeper rooting. If planting holes are augered, make sure that the sides of the holes are not glazed.
- Select microsites for planting that afford some natural protection and provide the most favorable growing conditions.
- Plant in a natural pattern, avoiding straight, evenly spaced rows.

Recommended Weed Control Procedures

- Select method of weed control (herbicides, physical weed removal, or mulching) based on environmental, fiscal, and philosophical considerations.
- Maintain a weed-free circle that is 4 feet (1.2m) in diameter around individual seedlings or acorns for at least 2 to 3 years after planting; if using herbicides to control weeds, remove weeds in circle with a diameter of 6 feet (1.8m)
- Initiate annual weed control by early spring to ensure that weeds do not become established and deplete soil moisture before oak roots can penetrate downward.
- Visit planting sites at least twice annually to remove both early- and late-season weeds that may have grown through mulch.
- If using postemergent herbicides, make sure that chemicals do not come in contact with foliage or the expanding buds of seedlings.
- After weed control is discontinued, visit plantings regularly to make sure vole populations and damage to seedlings have not increased. If increases are observed, remove thatch.

Methods of Protecting Trees from Animals

- Fences and large cages are effective only if livestock and deer are the only animals of concern. Fences require a large initial investment and result in fenced

areas being removed from livestock production. Fences and cages must be maintained regularly.

- Screen cylinders provide adequate short-term protection against insects, rodents, and deer but are ineffective against livestock, insects, or small rodents. Shoots that grow through the sides of tubes are vulnerable to browsing.
- Treeshelters have proven very effective in protecting rangeland oak seedlings from a wide range of animals and stimulating rapid, above-ground growth. They are relatively expensive but can greatly reduce the time required for seedlings to grow to sapling stage.
- Habitat modification can reduce damage from grasshoppers and some rodents, but it is ineffective for larger ranging animals, such as deer. Care must be taken to monitor the regrowth of vegetation or animals will quickly reoccupy site.

Recommended Procedures for Treeshelter Installation

- Select the size of treeshelter based on the browsing height of animals that are a threat.
- Install shelters so that they are upright and secure them to stakes using plastic ratchet clips or wire; make sure that seedlings are not damaged when shelters are secured to posts.
- When treeshelters are used, plant in an aesthetic, "natural" arrangement rather than in regular, evenly spaced rows.
- Utilize stakes that are durable enough to last the length of time treeshelters will be in place and pound them at least 1 foot (31 cm) into the ground before planting seedlings.
- Make sure that the tops of stakes are lower than the tops of shelters to prevent access by rodents that can climb stakes and damage to seedling shoots from rubbing against stakes.
- To prevent seedling desiccation, install shelters with the base buried in the ground.
- To prevent bird access, install plastic shelters with the base buried in the ground.
- If treeshelters are placed in pastures grazed by livestock, secure the shelters to metal posts using wire and thread flexible wire through the top instead of using plastic netting.

Recommended Treeshelter Maintenance Procedures

- Visit shelters at least once each year to make sure they are upright, attached to the stake, buried in the ground, and functioning properly.

- Keep a 4-foot (1.2 m) diameter or larger circle around shelters free of weeds for at least 2 years after planting, and remove weeds that grow inside shelters.
- Replace flexible netting that has blown off shelter tops.
- Replace stakes that have rotted or broken.
- Leave shelters in place for at least 3 years after seedlings have grown out the tops, longer if shelters are still intact and are still intact and are effectively protecting seedlings.
- Remove shelters if they are restricting growth or abrading seedlings; to remove solid shelters, slice down the sides with a razor or knife, being careful not to damage the seedling inside.

Fertilization, Irrigation, and Top Pruning

- Place .74-ounce (21-g), slow release fertilizer tablets (20-10-5) 3 to 4 inches (7.5 to 10 cm) below planted acorns or seedlings.
- Irrigation in many situations in not necessary if there is timely and thorough weed control.
- If irrigation is needed for established and the terrain is steep or percolation of water through soil is slow, construct earthen irrigation basins.
- Provide irrigation in the form of infrequent, deep irrigations rather that frequent, shallow irrigations; time irrigations to extend the rainy season.
- Always control competing vegetation, even in situations where supplemental irrigation is provided.
- Top-prune seedlings at the time of planting if they are too tall and are out of balance with root systems; prune small, liner stock back to a 6-inch (15 cm) top.

Appendix F

Resources

This page intentionally left blank.

California Cattleman's Association
1221 H. Street, Suite 101
Sacramento, CA 95814
(916) 444-0845
http://www.calcattlemen.org/

California Department of Forestry and Fire Protection (CAL FIRE)
1416 Ninth Street
Sacramento, CA 95814
(916) 227-2657
http://www.fire.ca.gov/

California Farm Bureau Federation
1601 Exposition Boulevard
Sacramento, CA 95815
(916) 561-5500
http://www.cfbf.com/

California Native Plant Society
2707 K Street, Suite 1
Sacramento, CA 95816
http://www.cnps.org

California Oak Foundation
(Now a project of the California Wildlife Foundation)
1212 Broadway, Suite 810
Oakland, CA 94612
(510) 763-0282
http://www.californiaoaks.org/
http://www.californiawildlifefoundation.org/

California Oak Mortality Task Force
http://nature.berkeley.edu/comtf/

California Wildlife Conservation Board, Oak Woodlands Conservation Program
https://wcb.ca.gov/Programs/Oaks

El Dorado County U.C. Master Gardeners
311 Fair Lane
Placerville, CA 95667
(530) 621-5512
The office is staffed 9 a.m. to noon, Monday through Friday.
http://ucanr.edu/sites/EDC_Master_Gardeners/

The Nature Conservancy
785 Market Street
San Francisco, CA 94103
(415) 777-0487
http://nature.org/

University of California
Division of Agriculture and Natural Resources
http://ucanr.edu/

University of California Cooperative Extension
Bill Frost, Ph.D.
Director for El Dorado County
311 Fair Lane
Placerville, CA 95667
(530) 621-5509
Fax: (530) 642-0803
http://ceeldorado.ucdavis.edu
Email: wefrost@ucdavis.edu

SPECIFIC RESOURCE ARTICLES:

Blue oak seedling age influences growth and mortality
http://californiaagriculture.ucanr.org/landingpage.cfm?articleid=ca.v061n01p11&fulltext=yes

Blue Oaks: Forage Production and Quality
http://ucanr.edu/sites/oak_range/Oak_Articles_On_Line/Oak_Woodland_Products_Range_Management_Livestock/Blue_Oaks__Forage_Production_and_Quality/

Exclosure size affects young blue oak seedling growth
http://californiaagriculture.ucanr.org/landingpage.cfm?articleid=ca.v061n01p16&fulltext=yes

Factors affecting blue oak sapling recruitment and regeneration
http://www.phytosphere.com/publications/Factors_affecting_blue_oak_sapling_recritment_and_regeneration.pdf

How to grow California oaks
http://ucanr.edu/sites/oak_range/Oak_Articles_On_Line/Oak_Regeneration_Restoration/How_to_Grow_California_Oaks/

Managed Grazing and Seedling Shelters
Enhance Oak Regeneration on Rangelands
http://ucce.ucdavis.edu/files/repositoryfiles/ca5904p217-69207.pdf

Modeling the Effectiveness of Tree Planting to Mitigate Habitat Loss in Blue Oak Woodlands
http://www.fs.fed.us/psw/publications/documents/psw_gtr184/psw_gtr184_077_Standiford.pdf

Oak Seedlings Can Be Established on Grazed Rangelands
http://ucanr.org/delivers/impactview.cfm?impactnum=539

PRC §21083.4
http://codes.findlaw.com/ca/public-resources-code/prc-sect-21083-4.html

Recommendations to reduce deer grazing
https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83544&inline

Restoring Oak Woodlands in California: Theory and Practice
http://www.phytosphere.com/restoringoakwoodlands/oakrestoration.htm

Small-Parcel Landowner's Guide to Woodland Management
http://anrcatalog.ucdavis.edu/pdf/8263.pdf

NURSERIES:

Inclusion on this list does not indicate a recommendation but a possible resource. Acorns and seedlings from local sources are better adapted for local conditions and using them will improve the chances for successful plantings. The source should be identified for any purchase.

Local Nurseries that may sell native plants

Big Oak Nursery
10071 Grant Line Road
Elk Grove, CA 95624
(916) 686-1180
http://bigoaknursery.com/

El Dorado Nursery & Garden Inc.
3931 C Durock Road
Shingle Springs, CA 95682
(530) 676-6555
http://www.eldoradonursery.com/

Front Yard Nursery
5801 Mother Lode Drive
Placerville, CA 95667
(530) 626-3494
http://frontyardnursery.com/

Golden Gecko Garden Center
4665 Marshall Road
Garden Valley, CA 95633
(530) 333-2394
http://www.thegoldengecko.com/

High Ranch Nursery
3800 Del Mar Ave., P.O. Box 1410
Loomis, CA 95650-1410
(916) 652-9261
http://hrnursery.com/

Green Acres
205 Serpa Way
Folsom, CA 95630
(916) 358-9099
http://www.idiggreenacres.com/green-acres-folsom/

Lotus Valley Nursery & Garden
5606 Petersen Lane
Lotus, CA 95651
(530) 622-2321

Urban Tree Farm
3010 Fulton Road
Fulton, CA 95439
(707) 544-4446
http://www.urbantreefarm.com/

Native Plant Nurseries

Identified through the California Native Plant Society (CNPS) website at http://www.cnps.org/cnps/grownative/nurseries.php

Lu Restoration Nursery
3807 Rolling Hills Road
Sheridan, CA 95681
(916) 622-5827
http://www.lu-restoration.com/Home/Home.html

California Native Plant Society plant sales
http://www.eldoradocnps.org/2014-02-27-21-26-30/chapter-plant-sales

Cornflower Farms
P.O. Box 896
Elk Grove, CA 95759
(916) 689-1015
www.cornflowerfarms.com

Floral Native Nursery
2511 Floral Avenue
Chico, CA 95973
(530) 892-2511 (phone/fax)
www.floralnativenursery.com

Forest Seeds of California
1100 Indian Hill Road
Placerville, CA 95667
(530) 621-1551

Hartland Nursery
13737 Grand Island Road
Walnut Grove, CA 95690
(916) 775-4021
www.hartlandnursery.com

Intermountain Nursery
30443 N. Auberry Road
Prather, CA 93651
(559) 855-3113
http://www.intermountainnursery.com/

Native Springs Nursery
P.O. Box 4071
Yankee Hill, CA 95965
Butte County
(530) 514-8578
www.nativespringsnursery.com

Oracle Oak Nursery
Hopland, CA
(415) 225-5567
http://oracleoaknursery.com/

Park Place Gardens Nursery
P.O. Box 789
Loomis, CA 95650
(916) 276-8225
www.ppgn.com

Appendix G

Literature Cited

This page intentionally left blank.

Appendix G
Literature Cited

1. American River Conservancy. 2016. Upper Cosumnes River Watershed. http://www.arconservancy.org/site/c.psKZL3PFLrF/b.5780075/k.504E/Upper_Cosumnes_River_Watershed.htm

2. Bartolome, James W.; Muick, Pamela C.; McClaran, Mitchel, P. 1987. Natural regeneration of Californian hardwoods. In: Plumb, Timothy R.; Pillsbury, Norman H., technical coordinators. Proceedings of the symposium on multiple-use management of California's hardwood resources;1986 November 12-14; San Luis Obispo, CA. Gen. Tech. Rep. PSW-100. Berkeley, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Forest and Range Experiment Station: 26-31.

3. Birdsey, R.A. 1992. Carbon storage and accumulation in United States Forest Ecosystems. ed. Northeastern Forest Experiment Station: United Stated Department of Agriculture, Forest Service.

4. Bolsinger, C.L. 1988. The hardwoods of California's timberlands, woodlands, and savannas. Resour. Bull. PNW-RB-148. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 148 p.

5. California Board of Forestry and Fire Protection. 2016a. http://www.bof.fire.ca.gov/professional_foresters_registration/

6. California Board of Forestry and Fire Protection. 2016b. http://www.bof.fire.ca.gov/professional_foresters_registration/about_seebox/the_registered_professional_forester__printable_pamphlet_.pdf

7. California Department of Conservation.2014. Farmland Mapping and Monitoring Program, 2012 Field Report for El Dorado County http://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/2010-2012/field_reports/eld12.pdf.

8. CAL FIRE. 2015. "FRAP Vegetation (FVEG15_1)" [GIS data]. An accurate depiction of the spatial distribution of habitat types within California is required for a variety of legislatively mandated government functions. Accessed March 2016. http://frap.fire.ca.gov/data/frapgisdata-sw-fveg_download.

9. Calflora: Information on California plants for education, research and conservation, with data contributed by public and private institutions and individuals, including the Consortium of California Herbaria. 2015. Berkeley, California: The Calflora Database [a non-profit organization]. Available: http://www.calflora.org/ (Accessed: Mar 10, 2015).

10. Camping, T.J., R.A. Dahlgren, K.W. Tate, and W.R. Horwath. 2002. Changes in soil quality due to grazing and oak tree removal in California blue oak woodlands. In: Standiford, R.B., D. McCreary, and K.L. Purcell (tech. coords.), Proceedings of the Fifth Symposium on Oak Woodlands: Oaks in California's Changing

Landscape. Gen. Tech. Rep. PSW-GTR-184. Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture.

11. CDFW (California Department of Fish and Wildlife). 2015. Rarefind 5: Commercial version. Online database. California Natural Diversity Database. CDFW, Biogeographic Data Branch. Accessed November 2015. http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp.

12. CDFW. Undated. CWHR Habitat Classification Scheme. State of California Resources Agency. Department of Fish and Wildlife. http://www.dfg.ca.gov/biogeodata/cwhr/wildlife_habitats.asp.

13. CNPS (California Native Plant Society). 2016. Inventory of Rare and Endangered Plants. Online ed. Version 8-02. Sacramento, California: CNPS, Rare Plant Program. Accessed February 2016. http://www.rareplants.cnps.org/.

14. Dahlgren, R.A., W. Horwatch, K. Tate, T. Camping. 2003. Blue oak enhance soil quality in California oak woodlands. California Agriculture 57: 42-47.

15. El Dorado County. 2003. *El Dorado County General Plan Draft Environmental Impact Report.* 3 vols. SCH no. 2001082030. Placerville, California: El Dorado Planning Department. May 2003.

16. El Dorado County. 2008. El Dorado County Oak Woodland Management Plan – Adopted May 6, 2008. El Dorado County, Placerville, California.

17. El Dorado County. 2013. 2013 El Dorado and Alpine Counties Crop Report. Department of Agriculture/Weights & Measures. http://www.edcgov.us/Government/Ag/2013_Crop_Report.aspx

18. El Dorado County. 2006. Biological Resources Study and Important Habitat Mitigation Program Interim Guidelines. Adopted November 9, 2006. Placerville, CA.

19. Frost, Bill and Ken Churches. 2003. Monitoring Oak Woodland Canopy Change: El Dorado, Amador and Calaveras Counties University of California, Publication Number CRY-003.

20. Frost, W.E. 2001. Disturbance around Oaks. University of California Cooperative Extension - El Dorado County. Placerville, CA. http://ucce.ucdavis.edu/files/filelibrary/616/3836.pdf

21. Gaman, T. and J. Firman. 2006. Oaks 2040: The Status and Future of Oaks in California. California Oak Foundation. Oakland, California.

22. Garrison, B. 1992. California oaks and deer. In: Oaks 'n' Folks >7(4). http://ucanr.edu/sites/oak_range/Oak_Articles_On_Line/Oak_Woodland_Wildlife/California_Oaks_and_Deer/

23. Garrison, B. 1996. Appendix A. Vertebrate wildlife species and habitat associations. In: Guidelines for managing California's hardwood rangelands. University of California Division of Agriculture & Natural Resources Publication 3368.

24. Georgetown Divide Resource Conservation District. 2004. Watershed Assessment. *In*: South Fork American River Watershed Stewardship Strategy. http://www.eldoradorcd.org/documents/FinalStewardshipStrategyMay2004.pdf

25. Giusti, G.A., A. Leider, J. Vilms, and J. Fetherstone. 2005. Planning options for oak conservation. In: Giusti, G.A., D.D. McCreary, and R. B. Standiford (eds.), A Planner's Guide for Oak Woodlands. University of California Agriculture and Natural Resources Publication 3491.

26. Giusti, G.A., D.D. McCreary, and R.B. Standiford. 2005. Planning's role in oak woodland conservation. In: Giusti, G.A., D.D. McCreary, and R. B. Standiford (eds.), A Planner's Guide for Oak Woodlands. University of California Agriculture and Natural Resources Publication 3491.

27. Giusti, G., T. Scott, B. Garrison, and K. Shaffer. 1996. Oak woodland wildlife ecology, native plants, and habitat relationships. In: Guidelines for Managing California's Hardwood Rangelands. University of California Division of Agriculture & Natural Resources Publication 3368.

28. Giusti, G.A., R.B. Standiford, D.D. McCreary, A. Merenlender, and T. Scott. 2004. Oak Woodland Conservation in California's Changing Landscape. Integrated Hardwood Management Range Program. http://ucanr.edu/sites/oak_range/files/60502.pdf

29. Harris, R.R. and S.D. Kocher. 2002. Oak management by county jurisdictions in the Central Sierra Nevada, California. In: Standiford, R.B., D. McCreary, and K.L. Purcell (tech. coords.), Proceedings of the Fifth Symposium on Oak Woodlands: Oaks in California's Changing Landscape. Gen. Tech. Rep. PSW-GTR-184. Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture.

30. Hilty, J.A., W.Z. Lidicker, Jr., and A.M. Merenlender. 2006. Corridor ecology: the science and practice of linking landscapes for biodiversity conservation. Island Press, Washington, D.C.

31. Holland, V. L. 1976. In defense of blue oaks. Fremontia 4:3-8.

32. Kelly, M., B. Allen-Diaz, and N. Kobzina. 2005. Digitization of a historic dataset: the Wieslander California vegetation type mapping project. Madroño 52(3):191-201.

33. Kelly, M., K. Ueda and B. Allen-Diaz. 2008. Considerations for ecological reconstruction of historic vegetation: Analysis of the spatial uncertainties in the California Vegetation Type Map dataset. Plant Ecology 194 (1): 37-49.

34. Larsen, R., D. Lewis, and Y. Valachovic. 2005. Watershed management in oak woodlands. In: Giusti, G., D.D. McCreary, and R.B. Standiford (eds.), A Planner's Guide for Oak Woodlands. University of California Agriculture and Natural Resources Publication 3491.

35. Mayer, K.E. and W.F. Laudenslayer, Jr. 1988. A Guide to Wildlife Habitats of California. State of California Resources Agency. Department of Fish and Wildlife. http://www.dfg.ca.gov/biogeodata/cwhr/wildlife_habitats.asp#guide_pub

36. McCreary, D.D. 2004. Fire in California's Oak Woodlands. University of California Cooperative Extension. http://forestry.berkeley.edu/sodsymposium/Fire_in_Cal_Oak_Woodlands_McCreary_623041.pdf

37. McCreary, D.D. 2009. Regenerating Rangeland Oaks in California. University of California Agriculture and Natural Resources Publication 24601e.

38. McCreary, D.D. 1995. How to Grow California Oaks. University of California, Division of Agriculture and Natural Resources.

39. McCreary, D.D. undated. How to Collect, Store, and Plant Acorns. California Oak Foundation. Oakland, CA. http://www.californiaoaks.org/ExtAssets/careacornssec.pdf

40. Merenlender, A. and K. Heise. 1999. Wildlife response to different kinds of residential development. Integrated Hardwood Rangeland Oak Fact Sheet No. 86. http://ucanr.edu/sites/oak_range/Oak_Articles_On_Line/Oak_Woodland_Wildlife/Wildlife_Response_to_Different_Kinds_of_Residential_Development/?sharing=yes.

41. New Economics & Advisory. 2016. El Dorado County Oak Resources In-Lieu Fees Nexus Study. June.

42. Pavlik, B.M., P.C. Muick, S.G. Johnson, and M. Popper. 1991. Oaks of California. Cachuma Press.

43. Sanborn, S. 1989. Protecting Trees from Construction Impacts. California Department of Forestry and Fire Protection. Tree Notes, Number 1. Sacramento, CA. http://calfire.ca.gov/foreststeward/pdf/treenote1.PDF

44. Saving, S.C. and G.B. Greenwood. 2002. The potential Impacts of Development on Wildlands in El Dorado County, California. In: Standiford, R.B., D. McCreary, and K.L. Purcell (tech. coords.), Proceedings of the Fifth Symposium on Oak Woodlands: Oaks in California's Changing Landscape. Gen. Tech. Rep. PSW-GTR-184. Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture.

45. Scott, T. 1996. Open space and private land opportunities for hardwood rangeland conversion. In: Guidelines for Managing California's Hardwood Rangelands. University of California Division of Agriculture & Natural Resources Publication 3368.

46. Shaffer, K. 1996. Appendix B. Sensitive plant species on hardwood rangelands. In: Guidelines for Managing California's Hardwood Rangelands. University of California Division of Agriculture & Natural Resources Publication 3368.

47. Siegel, R. B. and D. F. DeSante. 1999. Version 1.0. The draft avian conservation plan for the Sierra Nevada Bioregion: conservation priorities and strategies for safeguarding Sierra bird populations. Institute for Bird Populations report to California Partners in Flight.

48. Standiford, R. 1999. California's Hardwood Rangelands: Production and Conservation Values. Oaks 'n' Folks, August 1999, University of California, Integrated Hardwood Range Management Program, 14(2).

49. Standiford, R. and T.A. Scott. 2001. Value of oak woodlands and open space on private property values in California. Investigacion Agrariai Sistemas Y Recrsos Forestales I (2001): 137-152.

50. Standiford, R. and T. Adams. 1996. Fire in California's hardwood rangelands. In: Guidelines for Managing California's Hardwood Rangelands. University of California Division of Agriculture & Natural Resources Publication 3368.

51. Standiford, R.B., J. Klein, and B. Garrison. 1996. Sustainability of Sierra Nevada hardwood rangelands. In: Sierra Nevada Ecosystem Project, Final Report to Congress. University of California, Centers for Water and Wildland Resources. Davis, CA.

52. Standiford, R. and D. McCreary. 1996. Sustainable management of hardwood rangelands: Regeneration and stand structure considerations. In: Guidelines for Managing California's Hardwood Rangelands. University of California Division of Agriculture & Natural Resources Publication 3368.

53. Standiford, R.B., D. McCreary, and W. Frost. 2002. Modeling the effectiveness of tree planting to mitigate habitat loss in blue oak woodlands. In: Standiford, R.B., D. McCreary, and K.L. Purcell (tech. coords.), Proceedings of the Fifth Symposium on Oak Woodlands: Oaks in California's Changing Landscape. Gen. Tech. Rep. PSW-GTR-184. Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture.

54. Stephens, S.L. 1997. Fire history of a mixed oak-pine forest in the foothills of the Sierra Nevada, El Dorado County, California. In: Proceedings, Symposium on Oak Woodlands: Ecology, Management, and Urban Interface Issues.

55. Stuart, J.D. and J.O. Sawyer. 2001. Trees and Shrubs of California. California Natural History Guides, 62. University of California Press. Berkeley, CA.

56. Swiecki TJ, Bernhardt EA, Drake C. 1997. Factors affecting blue oak sapling recruitment. In: Pillsbury NH, Verner J, Tietje WD (tech. coords.). Proc Symp on Oak Woodlands: Ecology, Management and Urban Interface Issues. March 19–22, 1996, San Luis Obispo, CA. USDA Forest Service Gen Tech Rep PSW-GTR-160:157–67

57. Tietje, W., K. Purcell, and S. Drill. 2005. Oak Woodlands as Wildlife Habitat. In: Giusti, G., D.D. McCreary, and R.B. Standiford (eds.), A Planner's Guide for Oak Woodlands. University of California Agriculture and Natural Resources Publication 3491.

58. Tol, R.S. 2004. The marginal damage costs of carbon dioxide emissions: an assessment of the uncertainties. Energy Policy 33: 2064-74.

59. Troy, A. and Wilson, M.A. 2006. Mapping ecosystem services: practical challenges and opportunities in linking GIS and value transfer. Ecological Economics 60: 435-49.

60. Tucker, J. M. 1980. Taxonomy of California oaks. In: T. R. Plumb, technical coordinator. Proceedings of the Symposium on the Ecology, Management and Utilization of California oaks. Berkeley, CA; Pacific Southwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture.

61. University of California Division of Agriculture and Natural Resources Website. http://ucanr.edu/

62. USDA Forest Service. 2001. Sierra Nevada Forest Plan Amendment Final Environmental Impact Statement. USDA Forest Service, Pacific Southwest Region. http://www.fs.usda.gov/detail/r5/landmanagement/planning/?cid=STELPRDB5349922

63. USDA Forest Service. Undated. Peavine Point Research Natural Area. USDA Forest Service, Pacific Southwest Region. http://www.fs.fed.us/psw/programs/rna/gtr_chapters_pdf/peavine_point_rna.pdf.

64. USDI Bureau of Land Management. 2006. Sierra Draft Resource Management Plan and Environmental Impact Statement. USDI Bureau of Land Management. Folsom Field Office.

65. Wildlife Conservation Board. 2001. The Oak Woodlands Conservation Act of 2001, Program Application and Guidelines. State of California Resources Agency, California Wildlife Conservation Board.

66. Wildlife Conservation Board Website. COWCP legislative goal, undated. https://www.wcb.ca.gov/Programs/Oaks

Appendix E

Oak Resources Technical Report

853 LINCOLN WAY, SUITE 208
AUBURN, CALIFORNIA 95603
T 530.887.8500 F 530.887.1250

February 25, 2020 12450.01

Mr. Evan Mattes
Associate Planner, El Dorado County
2850 Fairlane Court
Placerville, CA 95667

Subject: DR19-0006/Cool Dollar General, Oak Resources Technical Report

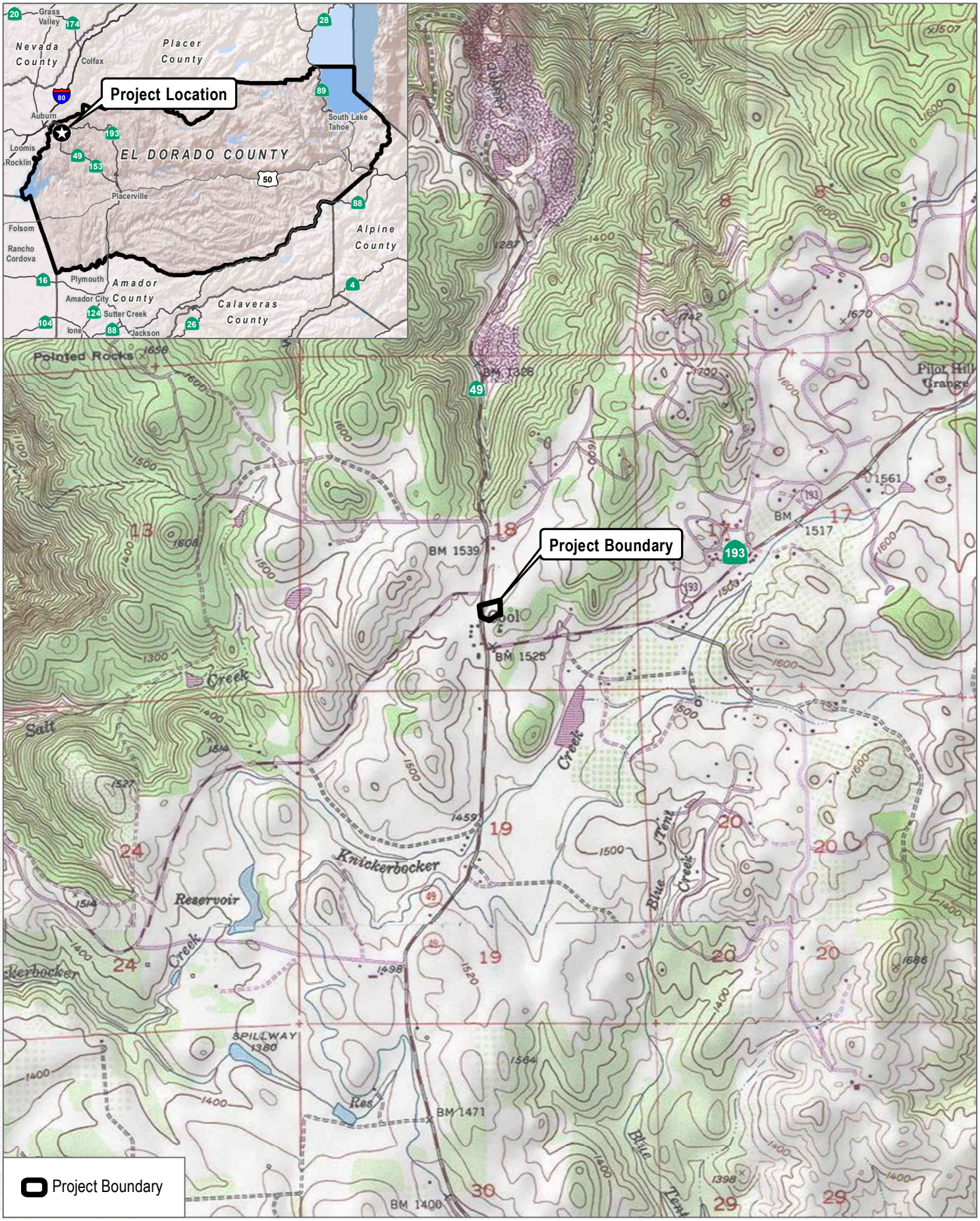
Dear Mr. Mattes:

This Oak Resources Technical Report (ORTP) summarizes Dudek's field evaluation of oak resources on the subject project site located on the south side of Northside Drive, east of State Route (SR) 49 in the community of Cool, El Dorado County, California. This report includes a discussion of site evaluation methods, a summary of findings, identification of anticipated impacts, and oak resource protection recommendations, consistent with the El Dorado County Oak Resources Conservation Ordinance (Ordinance No. 5061).

SITE AND PROJECT DESCRIPTION

The 1.69-acre project site (APN 071-500-037) is located on the south side of Northside Drive, east of SR 49 in the community of Cool, El Dorado County, California (Figure 1). The site is undeveloped with gently sloping to flat terrain. Elevations on site range from approximately 1,525 to 1,555 feet above mean sea level (msl) and drainage generally flows to the southeast. The site bordered by commercial development to the north, SR 49 to the west, and vacant property to the south and east. A graded, gravel driveway and pad exist in the central portion of the property, accessed by Northside Drive. Vegetative cover on site is dominated by annual, non-native grasses, with eleven (11) native oak and pine trees concentrated along the eastern boundary and the northwest corner. The site contains eight (8) Individual Native Oak Trees, one (1) of which is classified as a Heritage Tree. No Oak Woodlands were mapped on the project site.

The project proposes construction of a 9,100 square foot building for commercial/retail uses (Dollar General Store) and associated driveway, parking lot, utility, and landscaping improvements.



SOURCE: USGS 7.5 Minute Series Auburn Quadrangle(s)
Township 12N / Range 9E / Section 18

DUDEK

0 750 1,500 Feet

FIGURE 1

Project Location

County of El Dorado Dollar General Project

REGULATORY FRAMEWORK

The project site is located within unincorporated El Dorado County and is therefore subject to the County's oak resources reporting and impact mitigation requirements outlines in El Dorado County's Oak Resources Management Plan (ORMP) and codified in County Ordinance No. 5061. As defined in this ordinance, Oak Resources are defined as:

> *"Collectively, Oak Woodlands, Individual Native Oak Trees, and Heritage Trees."*

Individual Native Oak Tree are defined as:

> *"Any live native oak tree of the genus Quercus (including blue oak (Quercus douglasii), valley oak (Quercus lobata), California black oak (Quercus kelloggii), interior live oak (Quercus wislizeni), canyon live oak (Quercus chrysolepis), Oregon oak (Quercus garryana), oracle oak (Quercus x morehus), or hybrids thereof) with a single main trunk measuring greater than 6 but less than 36 inches dbh, or with a multiple trunk with an aggregate trunk diameter measuring greater than 10 but less than 36 inches dbh."*

Hertitage Trees are defined as:

> *"Any live native oak tree of the genus Quercus (including blue oak (Quercus douglasii), valley oak (Quercus lobata), California black oak (Quercus kelloggii), interior live oak (Quercus wislizeni), canyon live oak (Quercus chrysolepis), Oregon oak (Quercus garryana), oracle oak (Quercus x morehus), or hybrids thereof) with a single main trunk measuring 36 inches dbh or greater, or with a multiple trunk with an aggregate trunk diameter measuring 36 inches or greater."*

The ordinance and ORMP also define oak resource impact reporting requirements and standards for impact mitigation. This Oak Resources Technical Report has been developed to address County requirements and includes mapped tree locations (Attachment A), tree size and attribute data and impact status (Attachment B), and recommendations for protection of trees to be retained on the project site (Attachment C).

METHODS

A Qualified Professional[1] (Registered Professional Forester and International Society of Arboriculture (ISA) Certified Arborist) conducted a site evaluation on January 30, 2020 to document Oak Resources and collect necessary location and attribute information. Attribute information was collected for all trees on the project site with trunk Diameter at Breast Height

[1] El Dorado County Ordinance No. 5061, Section 130.39.030

(dbh) measurement equal to or exceeding 6 inches. Tree attribute data collected during the site evaluation included trunk diameter (dbh), tree height, canopy spread, general health condition, structural condition and presences of observable pests or other tree maladies. Trunk diameters were measured using a diameter tape which provides adjusted figures[2] for diameter measurements when wrapping the tape around a tree's circumference. Diameter measurements were collected using standard protocol described by the Council of Tree and Landscape Appraisers in the "Guide for Plant Appraisal," published by the ISA.[3]

Trunk diameter measurements were taken at 4.5 feet above the ground along the trunk axis, with a few common exceptions. In cases where a tree's trunk split into multiple stems at approximately 4.5 feet above ground, the measurement was made at the location that best represented the trunk's diameter. Tree height measurements were estimated by the arborist and tree canopy diameter measurements were typically estimated by "pacing-off" the measurement based on the arborist's knowledge of his stride length or by visually estimating the canopy width. The tree crown measurements were made along an imaginary line intersecting the tree trunk that best represented the trees longest canopy diameter.

Pursuant to the Guide for Plant Appraisal, tree health and structure were evaluated with respect to five distinct tree components: roots, trunk, scaffold branches, small branches, and foliage. Each tree component was assessed with regard to health factors such as insect, fungal or pathogen damage, mechanical damage, presence of decay, presence of wilted or dead leaves, and wound closure. Components were graded as *good*, *fair to good*, *fair*, *fair to poor*, and *poor*, with 'good' representing no apparent problems, and 'poor' representing a tree with significant health or structural inferiorities.

The location of each individual tree was mapped using a Trimble Geo-7x global positioning systems (GPS) unit. Individual tree attribute data was collected concurrently with tree location mapping and entered into the GPS datalogger. Trees were tagged by the project biologist (Bole and Associates, February 2020) prior to Dudek's site evaluation. The unique tree identification numbers on each tag were recorded during our field assessment and are presented herein as the tree identification numbers (Tree ID)[4]. Following field evaluation efforts, tree location data was entered into a geographic information systems (GIS) format to facilitate mapping and tree impact determination.

[2] Circumference measurement (inches) divided by 3.14 (π) provides diameter measurement in inches

[3] International Society of Arboriculture (ISA). 2000. Guide for Plant Appraisal (9th Edition)

[4] Trees #9 and 10 included in the project's Revised Biological Assessment (Bole and Associates, February 18, 2020) are located off-site and are therefore not included in this report.

RESULTS

A total of eight (8) Individual Native Oak Trees meeting the size criteria identified in County Ordinance No. 5061 were mapped on the project site, including two species (blue oak (*Quercus douglasii*) and interior live oak (*Quercus wislizeni*)). One (1) tree met the criteria for classification as a Heritage Tree (36-inch dbh or greater). No Oak Woodlands were mapped on the project site. Tree impacts were determined by evaluating mapped tree locations and the proposed project's grading plan. Seven (7) Individual Native Oak Trees would require removal to accommodate development of the proposed project, which includes the one (1) Heritage Tree located on site. The project's grading plan identifies that Tree #1 will be retained; however, grading activity will disturb approximately 50% of this tree's root area. Post-construction survival of Tree #1 with this level of root disturbance is unlikely, therefore, it has been identifies as an impact for the purposes of this report. A summary individual tree attributes and impact status is presented in Table 1. Attribute data for all trees mapped and assessed on the project site is presented in Attachment B. It is anticipated that the one (1) retained tree would require some level of canopy or root pruning or may be subject to construction-related dripline encroachment. Recommendations to minimize impacts to retained trees are provided in Attachment C.

Table 1
Individual Tree Data – DR19-0006/Cool Dollar General Project Site

Tree ID*	Botanical Name	Common Name	Total Trunk Diameter (in.)	Individual Native Oak Tree	Heritage Tree	Retain
1	*Quercus douglasii*	Blue oak	21	Yes	No	No
2	*Quercus douglasii*	Blue oak	19	Yes	No	Yes
3	*Quercus wislizeni*	Interior live oak	40	Yes	Yes	No
4	*Pinus sabiniana*	Gray pine	17	No	No	No
5	*Quercus douglasii*	Blue oak	15	Yes	No	No
6	*Quercus douglasii*	Blue oak	21	Yes	No	No
7	*Quercus wislizeni*	Interior live oak	27	Yes	No	No
8	*Pinus sabiniana*	Gray pine	16	No	No	No
11	*Quercus douglasii*	Blue oak	20	Yes	No	No
12	*Pinus sabiniana*	Gray pine	7	No	No	No
13	*Quercus wislizeni*	Interior live oak	24	Yes	No	No

**As noted, Trees #9 and 10 included in the project's Revised Biological Assessment are located off-site and are not included in this report.*

MITIGATION

As presented in Table 1, a total of seven (7) Individual Native Oak Trees will require removal, which includes one (1) Heritage Tree (Tree #3). The project is not exempt from mitigation

requirements and does not qualify for mitigation reductions, as outlined in County Ordinance 5061, Section 130.39.050. Mitigation for Individual Native Oak Tree and Heritage Tree impacts is therefore required, as outlined in County Ordinance 5061, Section 130.39.070(C)(2). As outlined, mitigation shall be reached according to the following options:

- In-lieu fee payment of $37,944. This is calculated based on an in-lieu fee of $153/diameter inch for removed Individual Native Oak Trees (128 total inches) plus $459/diameter inch for removed Heritage Trees (40 total inches).

- Off-site replacement planting consistent with Section 2 of the County's ORMP within an area subject to a Conservation Easement or acquisition in fee title by a land conservation organization. Replacement sizes and quantities shall be consistent with Table 4 in the ORMP. Based on a review of the project site and proposed development plan, the site is not large enough to accommodate on-site replacement trees. A Replacement Planting Plan shall be prepared, consistent with Section 2.4 of the ORMP, if this mitigation option is selected.

In addition to the mitigation requirements listed above, it is recommended that the tree protection recommendations outlined in Attachment C be implemented to minimize construction-related impacts to retained Tree #2.

ARBORIST'S DISCLOSURE

This report provides conclusions and recommendations based only on a visual examination of the trees and surrounding site by an ISA Certified Arborist and reasonable reliance upon the completeness and accuracy of the information provided to the arborist. The examination did not include subterranean or internal examination of the trees.

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 them. Although trees provide many benefits to those who live near them, they also include inherent risks from breakage or failure that can be minimized, but not eliminated.

Arborists cannot detect every condition that could possibly lead to the failure of a tree. Trees are living organisms subject to attack by disease, insects, fungi, weather, and other forces of nature, and conditions that lead to failure are often hidden within trees and below ground. There are some inherent risks with trees that cannot be predicted with any degree of certainty, even by a skilled and experienced arborist.

Arborists cannot predict acts of nature including, without limitation, storms of sufficient strength, which can cause even an apparently healthy tree to fail. Additionally, arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for any specific period of time. A tree's condition could change over a short or long period of time due to climatic, cultural or environmental conditions. Further, there is no guaranty or certainty that recommendations or efforts to correct unsafe conditions will prevent future breakage or failure of a tree.

To live or work near trees is to accept some degree of risk. Neither the author of this report nor Dudek have assumed any responsibility for, nor will either of them be liable for, any claims, losses or damages for damage to any tree, death or injury to any person, or any loss of or damage to any personal or real property.

Sincerely,

Scott Eckardt
Registered Professional Forester #2835
ISA Certified Arborist #WE-5914A

Cc: Brian Grattidge, Dudek

Att: Attachment A –Tree Location Exhibit
Attachment B – Tree Information Matrix
Attachment C – Tree Protection Measures

ATTACHMENT A

Tree Location Exhibit

SOURCE: USDA 2018

DUDEK

0 30 60 Feet

ATTACHMENT A

Oak Resources Technical Report

County of El Dorado Dollar General Project

ATTACHMENT B

Tree Information Matrix

Tree ID (tag)	Botanical Name	Common Name	Trunk Diameter (dbh) (in.)			Aggregate dbh (in.)	Height (ft.)	Canopy Radius (ft.)	Health	Structure	On-Site	Heritage Tree	Retain	Notes
			Trunk 1	Trunk 2	Trunk 3									
1	*Quercus douglasii*	Blue oak	21			21	25	15	Good-Fair	Good-Fair	Yes	No	No	nails, horseshoes on trunk
2	*Quercus douglasii*	Blue oak	19			19	25	13	Good-Fair	Good-Fair	Yes	No	Yes	
3	*Quercus wislizeni*	Interior live oak	40			40	30	20	Good-Fair	Fair	Yes	Yes	No	basal cavities, decay
4	*Pinus sabiniana*	Gray pine	17			17	45	11	Good-Fair	Good-Fair	Yes	No	No	
5	*Quercus douglasii*	Blue oak	15			15	30	11	Good-Fair	Good-Fair	Yes	No	No	
6	*Quercus douglasii*	Blue oak	21			21	35	13	Fair	Good-Fair	Yes	No	No	mistletoe
7	*Quercus wislizeni*	Interior live oak	20	7		27	30	16	Fair	Fair	Yes	No	No	basal cavities, canopy dieback
8	*Pinus sabiniana*	Gray pine	16			16	20	10	Fair-Poor	Poor	Yes	No	No	topped
11	*Quercus douglasii*	Blue oak	6	7	7	20	12	8	Fair	Fair-Poor	Yes	No	No	suppressed, basal cavities, lean
12	*Pinus sabiniana*	Gray pine	7			7	25	6	Fair	Fair-Poor	Yes	No	No	codominant leaders, included bark
13	*Quercus wislizeni*	Interior live oak	11	7	6	24	12	10	Fair	Poor	Yes	No	No	growing along ground

ATTACHMENT C

Tree Protection Recommendations

Attachment C
Tree Protection Recommendations

Tree Protection Measures Prior to Construction

Prior to any grading activity, retained trees with canopies that fall within 30 feet of construction activity shall be protected by fencing and signage. All contractors shall be made aware of the tree protection measures. A project arborist shall be assigned to monitor tree health and construction activity near retained trees on site. The project arborist shall be an International Society of Arboriculture (ISA) Certified Arborist or Registered Consulting Arborist.

Inspection: Any large tree proposed for preservation on site should be thoroughly inspected for internal or subterranean decay by an ISA Certified Arborist or Registered Consulting Arborist prior to construction activity to determine if retention/protection on site is a viable management option. A Level 2 Risk Assessment is recommended for all large retained trees on site.

Site Preparation: Tree removal, pruning, and inspection should be conducted during site preparation activities. Where permitted by the City, tree removal and pruning activity should be conducted according to industry standards (ANSI A300).

Fencing and Signage: A 4-foot high, orange web fence with tree protection signs shall be erected around all trees (or tree groups) to be retained. The protective fence shall be installed around the tree's dripline. This will delineate the tree protection zone and prevent unwanted activity in and around the trees in order to reduce soil compaction in the root zones of the trees and other damage from heavy equipment. Fences are to be mounted on stakes at no more than 10-foot spacing. In areas where fencing is located on paving or concrete that will not be demolished, then the stakes may be supported by an appropriate grade level concrete base. Tree protection signs should be attached to every fourth post. The contractor shall maintain the fence to keep it upright, taut, and aligned at all times. Fencing shall be removed only after all construction activities are complete.

Pre-Construction Meeting: A pre-construction meeting shall be held between all contractors (including grading, tree removal/pruning, builders, etc.) and the project arborist. The project arborist will instruct the contractors on tree protection practices and answer any questions. All equipment operators and spotters, assistants, or those directing operators from the ground, shall provide written acknowledgement of their receiving tree protection training. This training shall include information on the location and marking of retained trees, the necessity of preventing damage, and the discussion of work practices that will accomplish such.

Protection and Maintenance during Construction

Once construction activities have begun the following measures shall be adhered to:

Avoidance: Signs, ropes, cables, or any other items shall not be attached to any retained tree.

Equipment Operation and Storage: Operating heavy machinery around the root zones of trees will increase soil compaction, which decreases soil aeration and subsequently reduces water penetration in the soil. All heavy equipment and vehicles shall stay out of the fenced tree protection zone, unless where specifically approved in writing by the project arborist.

Storage and Disposal: Do not store or discard any supply or material, including paint, lumber, concrete overflow, etc. within the fenced tree protection zone or within 10 feet of any tree. Remove all foreign debris within the fenced tree protection zone; it is important to leave the duff, mulch,

chips, and leaves around the retained trees for water retention and nutrients. Avoid draining or leakage of equipment fluids near retained trees. Fluids such as: gasoline, diesel, oils, hydraulics, brake and transmission fluids, paint, paint thinners, and glycol (anti-freeze) should be disposed of properly. Keep equipment parked outside of the fenced tree protection zone of retained trees to avoid the possibility of leakage of equipment fluids into the soil. The effect of toxic equipment fluids on the retained trees could lead to decline and death.

Grade Changes: Grade changes are not recommended within the dripline of retained trees. No grade changes (cut, fill, compact) shall occur within 4 feet (measured horizontally) of the base of any retained tree. Lowering the grade within a tree's dripline will necessitate cutting main support and feeder roots, jeopardizing the health and structural integrity of the tree(s). Adding soil, even temporarily, on top of the existing grade will compact the soil further, and decrease both water and air availability to the trees' roots. A drainage outlet shall be provided, if necessary, to allow for appropriate surface drainage within the tree's dripline.

Moving Construction Materials: Care shall be taken when moving equipment or supplies near the trees, especially overhead. Avoid damaging the tree(s) when transporting or moving construction materials and working around retained trees (even outside of the fenced tree protection zone). Above ground tree parts that could be damaged (e.g., low limbs, trunks) should be flagged with red flagging. If contact with the tree crown is unavoidable, prune the conflicting branch(es) using ISA or ANSI A300 standards.

Trenching: All trenching shall be outside of the fenced tree protection zone. Roots primarily extend in a horizontal direction forming a support base to the tree similar to the base of a wineglass. Where trenching is necessary in areas that contain tree roots, prune the roots using a root pruner. All cuts should be clean and sharp, to minimize ripping, tearing, and fracturing of the root system. The trench should be made no deeper than necessary.

Irrigation: Trees that have been substantially root pruned (30% or more of their root zone) will require irrigation for the first twelve months. The first irrigation should be within 48 hours of root pruning. They should be deep watered every two to four weeks during the summer and once a month during the winter (adjust accordingly with rainfall). One irrigation cycle should thoroughly soak the root zones of the trees to a depth of 3 feet. The soil should dry out between watering; avoid keeping a consistently wet soil. Designate one person to be responsible for irrigating (deep watering) the trees. Check soil moisture with a soil probe before irrigating. Irrigation is best accomplished by installing a temporary above ground micro-spray system that will distribute water slowly (to avoid runoff) and evenly throughout the fenced tree protection zone ***but never soaking the area located within 6- feet of the tree trunk, especially during warmer months***. For trees not subject to root pruning activity, the amount of irrigation provided shall not be changed from that which was provided prior to the commencement of construction activity.

Canopy Pruning: All pruning shall be completed under the direction of an ISA Certified Arborist and following ISA or ANSI A300 standards. Only conflicting limbs, broken limbs and dead wood shall be removed from tree canopies.

Washing: Periodic washing of the foliage is recommended during construction but no more than once every two weeks. Washing should include the upper and lower leaf surfaces and the tree bark. This should continue beyond the construction period at a less frequent rate with a high-powered hose only

in the early morning hours. Washing will help control dirt/dust buildup that can lead to mite and insect infestations.

Maintenance after Construction

Once construction is complete the tree protection fencing may be removed and the following measures performed to sustain and enhance the vigor of the retained trees.

Mulch: Provide a 4-inch mulch layer under the canopy of trees. Mulch should include clean, organic mulch that will provide long-term soil conditioning, soil moisture retention, and soil temperature control.

Pruning: Pruning should *only* be done to maintain clearance and remove broken, dead or diseased branches. Pruning shall only take place following a recommendation by an ISA Certified Arborist and performed under the supervision of an ISA Certified Arborist. No more than 15% of the canopy shall be removed at any one time. All pruning shall conform to ISA or ANSI A300 standards.

Watering: Retained trees on site shall be watered as they were prior to the commencement of construction activity. Supplemental irrigation may be necessary for twelve months following substantial root pruning.

Watering Adjacent Plant Material: All plants near the trees shall be compatible with water requirements of said trees. Watering regime included in the site's landscape plan shall be developed with consideration for the water needs of retained trees.

Spraying: If the trees are maintained in a healthy state, regular spraying for insect or disease control should not be necessary. If a problem does develop, an ISA Certified Arborist should be consulted; the trees may require application of insecticides to prevent the intrusion of bark-boring beetles and other invading pests. All chemical spraying should be performed by a licensed applicator under the direction of a licensed pest control advisor.

Appendix F

Cultural Resource Report

CULTURAL RESOURCES INVENTORY SURVEY

Cool Development Project
circa 1.69-acres
El Dorado County, California.

Prepared for

Marcus H. Bole & Associates
104 Brock Drive
Wheatland, CA 95692

Author

Sean Michael Jensen, M. A.

Keywords *for Information Center Use:*
Cultural Resources Inventory Survey, circa 1.69-acres, El Dorado County, CEQA, USGS Auburn, Ca. 7.5' Quadrangle, No Significant Historical Resources, No Unique Archaeological Resources

June 3, 2019

GENESIS SOCIETY

ARCHAEOLOGICAL - HISTORICAL - CULTURAL RESOURCE MANAGEMENT SERVICES

ABSTRACT

This report details the results of a cultural resources inventory survey of approximately 1.69-acres of land comprised of relatively flat terrain, adjacent to the east side of State Route 49, a short distance north of Georgetown Road, in the community of Cool, in El Dorado County, California.

The proponent proposes commercial development of the property, an action that would likely involve construction of a commercial structure, parking, utilities, access and landscaping.

Existing records at the NCIC document that approximately 90% of the present APE had been subjected to previous archaeological investigation, and that aside from a mapping error no prehistoric or historic-era sites had been documented within the APE. As well, the present effort included an intensive-level pedestrian survey. The pedestrian survey failed to identify any prehistoric or historic-era sites within the APE.

Consultation was undertaken with the Native American Heritage Commission (NAHC) re. sacred land listings for the property. An information request letter was delivered to the NAHC on May 16, 2019. With no response, a second request letter was submitted to the NAHC on May 28, 2019. To date, no response has been received from the NAHC.

Based on the absence of significant historical resources/unique archaeological resources/historic properties within the APE, archaeological clearance is recommended for the project/undertaking as presently proposed.

CONTENTS

1. INTRODUCTION 1
Project Background 1
Scope of Work 1

2. LOCATION, ENVIRONMENTAL and CULTURAL CONTEXT 2
Location 2
Environment 2
Prehistory 3
Ethnography 4
Historic Context 4

3. RECORDS SEARCH and SOURCES CONSULTED 5
North Central Information Center Records 5
Other Sources Consulted 6

4. CULTURAL RESOURCES SURVEY and CULTURAL INVENTORY 7
Survey Strategy and Field Work 7
General Field Observations 7
Prehistoric Resources 8
Historic-era Resources 8

5. ELIGIBILITY CRITERIA 8

6. PROJECT EFFECTS 9

7. NATIVE AMERCIAN CONSULTATION 9

8. PROJECT SUMMARY 10

9. REFERENCES CITED and/or UTILIZED 11

ATTACHMENTS

Figure 1: Area of Potential Effects Map.
Copy of Records Search from NCIC, File No.: ELD-19-56, dated May 22, 2019.
Consultation letter to the Native American Heritage Commission (NAHC).

1. INTRODUCTION

Project Background

This report details the results of a cultural resources inventory survey of approximately 1.69-acres of land comprised of relatively flat terrain, adjacent to the east side of State Route 49, a short distance north of Georgetown Road, in the community of Cool, in El Dorado County, California.

The proponent proposes commercial development of the property, an action that would likely involve construction of a commercial structure, parking, utilities, access and landscaping.

Since the project will involve physical disturbance to ground surface and sub-surface components in conjunction with commercial development, it has the potential to impact cultural resources that may be located within the APE. In this case, the APE consists of the circa 1.69-acre property. Evaluation of the project's potential to impact cultural resources must be undertaken in conformity with El Dorado County rules and regulations, and in compliance with requirements of the California Environmental Quality Act of 1970, Public Resources Code, Section 21000, et seq. (CEQA), and The California CEQA Environmental Quality Act Guidelines, California Administrative Code, Section 15000 et seq. (Guidelines as amended).

Scope of Work

Compliance with CEQA (and County rules and regulations) requires completion of projects in conformity with the amended (October 1998) Guidelines, including in particular Section 15064.5. Based on these rules, regulations and Guidelines, the following specific tasks were considered an adequate and appropriate Scope of Work for the present archaeological survey:

- Conduct a records search at the North Central Information Center of the California Historical Resources Information System and consult with the Native American Heritage Commission. The goals of the records search and consultation are to determine (a) the extent and distribution of previous archaeological surveys, (b) the locations of known archaeological sites and any previously recorded archaeological districts, and (c) the relationships between known sites and environmental variables. This step is designed to ensure that, during subsequent field survey work, all significant/eligible cultural resources are discovered, correctly identified, fully documented, and properly interpreted.

- Conduct a pedestrian survey of the APE in order to record and evaluate any previously unidentified cultural resources. Based on map review, a complete coverage, intensive survey was considered appropriate, given the presence of moderate archaeological sensitivity within the property. The purpose of the pedestrian survey is to ensure that any previously identified sites are re-located and evaluated in relation to the present

project/undertaking. For any previously undocumented sites discovered, the field survey would include formally recording these resources on State of California DPR-523 Forms.

- Upon completion of the records search and pedestrian survey, prepare a Final Report that identifies project effects and recommends appropriate mitigation measures for sites that might be affected by the undertaking and that are considered significant or potentially significant per CEQA, and/or eligible or potentially eligible for inclusion on the National Register of Historic Places.

The remainder of the present document constitutes the Final Report for this project, detailing the results of the records search, consultation and pedestrian survey and providing recommendations for treatment of significant/eligible archaeological and historic sites. All field survey work followed guidelines provided by the Office of Historic Preservation (Sacramento) and conforms to accepted professional standards.

2. Location, Environmental and Cultural Context

Location

The present APE incorporates approximately 1.69-acres, and is located adjacent to the east side of State Route 49, a short distance north of Georgetown Road, in the community of Cool, in El Dorado County, California. Lands affected are located within a portion of Section 18 of Township 12 North, Range 9 East, as shown on the USGS Auburn, California, 7.5' Series Quadrangle (see attached ***Figure 1: Area of Potential Effects Map***).

Environment

The Project is located on the western flank of the north-central Sierra Nevada, within the community of Cool, approximately 0.25-miles northwest of Knickerbocker Creek. Elevation within the project area averages approximately 1,530 feet above mean sea level, while terrain consists of relatively flat open pasture surrounded by commercial and residential developments.

Warm, dry summer months have an average July maximum of over 100 F and winters exhibit an average January minimum in the mid-20s to low-30s F. Native valley oaks (*Quercus lobata*) occur throughout the project area, particularly where pockets of deep soil have accumulated along stream courses. Also present are blue oak (*Q. Douglasii*), interior live oak (Q. *wislizenii*), digger pine (*Pinus sabiniana*), manzanita (*Arctostaphylow viscida*), and various annual grasses and forbes, notwithstanding the effects of vegetation clearing for pasture use which has been extensive throughout the project region (Ornduff 1974).

Major water courses throughout this region of El Dorado County supported dense riparian associations which were often separated from forest and chaparral areas by stands of live oak, dwarf interior live oak, manzanita, *Ceanothus* and redbud. These interface zones provided abundant resources and excellent habitat for numerous species of mammals and birds, many of which exploited several of these zones concurrently.

The environment of the project area is likely to have undergone some changes since the end of the Pleistocene. Paleoclimatic reconstructions by West (1983) suggest a shift from a warmer period in which plant zones were ca. 300 meters higher in elevation and temperatures were 1.3-2.1 degrees C. warmer than at present, to the relatively cooler and more moist conditions prevalent today in which plant zones have shifted downward and southward (West 1983:3.20-3.21). This shift is believed to have occurred at around 2,500 to 2,800 years ago.

While the effects of long-term climatic change on environment and habitats are not fully assessed, there is no question that major environmental changes have occurred during recent times. Biologically extractive practices during the past century-and-a-half have reduced soil nutrients in some areas, timber harvesting and livestock grazing have reduced the available biomass, and the elimination of the Indians' practice of annual burning has undoubtedly affected many of the primary ecological relationships which once existed within the lower reaches of the Sierra Nevada generally. Combined with past mining and intensive ranching activities throughout this region, coupled with access road grading and vegetation clearing to improve pasture, there is no question that the environmental structure of the project vicinity has in fact been significantly altered over the years.

Prehistory

Initial human entry into California occurred at the beginning of the paleo-Indian Period – between about 10,000 and 6,000 B.C. (Fredrickson 1974). Within portions of the Central Valley, fluted projectile points have been found at Tracy Lake (Heizer 1938) and around the margins of Buena Vista Lake in Kern County. Similar materials have been found to the north, at Samwel Cave near Shasta Lake and near McCloud and Big Springs in Siskiyou County. These early peoples are thought to have subsisted using a combination of hunting and lacustrine exploitation (Moratto 2004).

These early cultural assemblages were followed by an increase in Native population density after about 7,500 years ago. Archaeologically defined as the Lower Archaic Period (6,000 to 3,000 BC), the transition to a less specialized foraging strategy clearly coincides with a middle Holocene climatic change to generally drier conditions which brought about desiccation of many of the West's pluvial lakes. Hunting and gathering populations of this period were small, mobile groups that focused increasingly on diverse environmental settings. By the beginning of the Middle Archaic Period (from about 3,000 to 1,000 BC), the broad regional patterns of foraging subsistence strategies had given way to more intensive procurement strategies, manifest in part by the establishment of year-round use of select village sites which in turn were located along major waterways. One of the most securely dated of these Archaic assemblages in northern California is from the Squaw Creek Site located north of Redding. Here, a charcoal-based C-14 date suggests extensive Native American presence around 6,500 years ago, or 4,500 BC. Most of the artifactual material dating to this time period has counterparts further south, around Borax (Clear) Lake and the Farmington Area a short distance east of Sacramento. Important artifact types from this time period include large wide-stemmed projectile points and manos and metates.

Toward the end of this period, between about 1,000 BC and AD 100, sociopolitical complexity and the development of status distinctions appear, partially defining the Upper

Archaic Period. Archaeological expressions within the northern and north-central Sierra Nevada during this period are defined as the Martis Complex, which maintained a hunter-gathering subsistence strategy and a high degree of mobility. Distinctive artifact types include manos and metates used for processing food, and relatively large, heavy projectile points and bifaces manufactured from locally available basalt.

Defining the Emergent Period, from AD 300-500 through AD 1,800, within both northern and north-central Sierra Nevada and Central Valley contexts, Penutian-speaking Native American peoples are thought to have arrived, including those (i.e., Nisenan) who occupied lands within and around the project area at the time of initial contact with European-American populations. Arriving ultimately from southern Oregon and the Columbia and Modoc Plateau region and proceeding down the major drainage systems (including the Feather, Yuba, Bear and American Rivers), these Penutian-speaking arrivals may have begun to displace the Martis populations, especially along the major river systems (Moratto 2004:303-304). Presumably introduced by these Penutian arrivals were more extensive use of bulbs and other plant foods, animal and fishing products more intensively processed with mortars and pestles, and perhaps the bow and arrow and associated small stemmed- and corner-notched projectile points (Ragir 1972).

Ethnography

The project area is located within territory occupied by the Nisenan at the time of initial contact with European Americans (Wilson and Towne 1978: Figure 1). The Nisenan are Native American peoples also referred to as "Southern Maidu" who occupied the drainages of the southern Feather River and Honcut Creek in the north, through Bear River and the Yuba and American River drainages in the south. Villages were frequently located on flats adjoining streams, and were inhabited mainly in the winter as it was usually necessary to go out into the hills and higher elevation zones to establish temporary camps during food gathering seasons (i.e., spring, summer and fall).

As with all northern California Indian groups, economic life for the Nisenan revolved around hunting, fishing and the collecting of plant foods. These people were very sophisticated in terms of their knowledge of the uses of local animals and plants, and of the availability of raw material sources that could be used in manufacturing an immense array of primary and secondary tools and implements. Unfortunately, only fragmentary evidence of the material culture of these people remains, due in part to perishability and in part to the impacts to archaeological sites resulting from later (historic) land uses (mining, timber harvest, and ranching).

Historic Context

Historic evidence exists to document that some of the Spanish and Mexican expeditions of the early 19th century may have come through and made brief stays within northern California. Gabriel Moraga's expedition was undertaken in 1806, with additional incursions occurring through the 1840's. European Americans began arriving in more substantial numbers in the mid-1820's, most notably with the trapping expeditions of Jedediah Smith.

In 1849, the discovery of gold at nearby Coloma led immediately to exploration and intensive placer mining along all virtually every stream in California (Clark 1970), including in particular Black Rock Creek and Blue Tent Creek, both of which are located east of the project area, and of course all other tributaries to and including as well the various Forks of the American River.

Mining dominated the economy and supported the growth of ancillary industry such as dry-goods stores, saloons, toll roads and stage lines, foundries, lumber mills, and water companies. As mining became more corporate and began to eliminate small-scale participation, many miners turned to agriculture and support industries. Most of the early ranches that resulted were self-sufficient operations which included a variety of kept animals, small plots dedicated to growing vegetables and grain, and orchards and vineyards.

Water storage and transportation and related hydroelectric development represent additional important historic themes in El Dorado County, along with logging, ground transportation, public land entry, and homesteading.

The early mining activity, coupled with historic through contemporary logging, ranching and associated water distribution projects, have all impacted prehistoric and early historic sites in this portion of El Dorado County and the project area.

It appears likely that construction of Highway 49, adjacent to the west side of the property, may have affected a portion of the project area, and aerial images of the property indicate that it, as well as the adjacent lands, have been intensively disturbed throughout the past several decades.

Cave Valley/Cool Elementary School was established sometime around 1900, and was formerly located southeast of the present APE. In 1952, the Northside Elementary School was constructed south of Cool, replacing the former school, which was subsequently demolished.

3. RECORDS SEARCH and SOURCES CONSULTED

Several types of information were considered relevant to evaluating the types of archaeological sites and site distribution that might be encountered within the project area. The information evaluated prior to conducting the pedestrian survey includes data maintained by the North Central Information Center, and available published and unpublished documents relevant to regional prehistory, ethnography, and early historic developments.

North Central Information Center Records

The official El Dorado County archaeological records were examined on May 22, 2019 (NCIC File No. ELD-19-56). This search documented the following existing conditions for the 6.69-acre APE, and for a 1/4-mile radius surrounding the APE.

- According to the Information Center, approximately 90% of the APE has been subjected to past archaeological survey as a result of three previous investigations (7378, 8084, 9326). As well, twelve (12) investigations have been conducted within the adjacent search radius. Collectively, fifteen (15) investigations have been documented within the overall search area (with four additional volumes, totaling 19 citations), including:

NCIC #	Date	Author(s)
000732	1990	Supernowicz
006813	1976	True and Crew
007378	2000	Historic Resource Associates
007381	1992	Supernowicz
007383	1992	Supernowicz
007387	1993	Supernowicz
007388	2001	Billat
007389	2004	Historic Resource Associates
008084	1987	Bass
008084b	1986	Wiant and Bass
008084c	1987	O'Connor
008086	1997	Windmiller and Russell
009326	2008	Leach-Palm, Larson, Brandy, King, Hartman, and Mikkelsen
009698	2008	Historic Resource Associates
010547	2009	Peak
010547b	2009	Peak
010547c	2008	Peak
010547d	2009	Peak
010728	2010	Hines

- According to the Information Center's records, one resource (P-09-3627) has been documented within the APE. Supernowicz (2000) described the site as consisting of the remnants of the historic Cave Valley/Cool Elementary School and bedrock outcrops that *may* have utilized for prehistoric lithic procurement. An examination of the primary record for this site revealed that no site boundary was provided on the site sketch map. Examination of both the site location and site sketch maps, coupled with the site description, confirmed that the site did not extend into outside of the 2000 subject property survey boundary. Consequently, the site was erroneously plotted as within the current APE, and efforts were made during the present investigation (see below) to confirm that no components of site P-09-3627 extend into the present APE. Additionally, four resources (P-09-3629, -3632, -3633, -5875) have been documented within the search radius.

Other Sources Consulted

In addition to examining the archaeological site and survey records of El Dorado County maintained at the North Central Information Center, the following sources were also included in the search conducted at the Information Center, or were evaluated separately:

- The National Register of Historic Places (1986, Supplements).
- The California Register of Historical Resources.
- The California Inventory of Historic Resources (State of California 1976).
- The California Historical Landmarks (State of California 1996).
- The California Points of Historical Interest (May 1992 and updates).
- The Historic Property Data File (OHP 2012).
- Determination of Effects (OHP 2012).
- Auburn, CA USGS 7.5' quadrangle (1953, 1975).
- NETR Topographic Maps (1944, 1948, 1955, 1959, 1961, 1965, 1972, 1977, 1981, 2012 and 2015).
- NETR Aerial Photos (1946, 1952, 1993, 1998, 2005, 2009, 2010, 2012 and 2014).
- Existing published and unpublished documents relevant to prehistory, ethnography, and early historic developments in the vicinity. These sources, reviewed below, provided a general environmental and cultural context by means of which to assess likely site types and distribution patterns for the project area.

4. CULTURAL RESOURCES SURVEY and CULTURAL INVENTORY

Survey Strategy and Field Work

All of the APE was subjected to intensive pedestrian survey by means of walking parallel transects, spaced at 10-meter intervals.

In searching for cultural resources, the surveyor considered the results of background research and was alert for any unusual contours, soil changes, distinctive vegetation patterns, exotic materials, artifacts, feature or feature remnants and other possible markers of cultural sites.

Fieldwork was undertaken on May 30, 2019 by Principal Investigator, Sean Michael Jensen, and archaeological technician, Sutter Michael Jensen. Mr. Jensen is a professional archaeologist, with more than 32 years of experience in archaeology, history and architectural history, who meets the Secretary of Interior's Standards for Professional Qualification, as demonstrated in his listing on the California Historical Resources Information System list of qualified archaeologists and historians. No special problems were encountered and all survey objectives were satisfactorily achieved.

General Field Observations

Disturbance to the ground surface and subsurface has been substantial throughout portions of the property. Examination of the NETR Aerial (1946, 1952, 1993, 1998, 2005, 2009, 2010, 2012 and 2014) and quadrangle maps (1944, 1948, 1953, 1955, 1959, 1961, 1965, 1972, 1975, 1977, 1981, 2012 and 2015) for the APE provides a clear history of the parcel over the past seven decades.

The property has been subjected to substantial re-contouring, observable in the form of two graded pads. The larger, westernmost of these two pads has been cut approximately 5 to 6 feet below the natural slope to the east, and has been covered with gravel. The easternmost pad has been excavated approximately 3 to 4 feet below the natural slope to the east, and exhibits small tree growth and cut limb, tree and brush piles.

The northern margin of the APE consists of a graded and paved access road which runs the entire property length. A retaining wall, and various landscaping, was observed within the western portion of the northern property margin, and a buried water line and water meter was observed within the northcentral portion of the property. Finally, electrical transmission lines were observed within the property.

Prehistoric Resources

No evidence of prehistoric use or occupation was observed within the APE. The absence of such materials might best be explained by the extensive disturbance to which the property has been subjected, and to more suitable habitation settings at nearby locales.

As noted in the records search section, above, one multi-component site (P-09-3627) has been documented immediately south of the present APE. Consequently, particular attention was paid to the surface soils within the subject APE's southern boundary. Trowel probes and examination of rodent back dirt piles failed to identify any prehistoric cultural material. Further, components of site P-09-3627, located south of the present APE were examined carefully. No evidence of prehistoric occupation, use or activity was observed. Instead, extensive ground disturbance was noted within that southern parcel, with several large boulders exhibiting evidence of having been moved into their current locations at some point in the recent (<50 years) past.

Historic-era Resources

No evidence of historic use or occupation was observed within the APE. As with the findings of prehistoric resources, the absence of historic-era artifacts, features and sites may best be explained by the degree of disturbance to which most of the property has been subjected. No historic-era components associated with site P-09-3627 were observed within the subject APE.

5. ELIGIBILITY CRITERIA

Sites identified within the project area were to be evaluated for significance in relation to CEQA significance criteria. Historical resources per CEQA are defined as buildings, sites, structures, objects, or districts, each of which may have historical, architectural, archaeological, cultural, or scientific significance. CEQA requires that, if a project results in an effect that may cause a substantial adverse change in the significance of a historical resource, alternative plans or mitigation measures must be considered; however, only significant historical resources need to be addressed. Therefore, before developing mitigation measures, the significance of cultural resources must be determined in relation to criteria presented in PRC 15064.5, which defines a historically significant resource (one

eligible for listing in the California Register of Historical Resources, per PRC SS5024.1) as an archaeological site which possess one or more of the following attributes or qualities:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
2. Is associated with the lives of persons important in our past
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
4. Has yielded, or may be likely to yield, information important in prehistory or history

In addition, CEQA further distinguishes between archaeological sites that meet the definition of a significant historical resource as described above (for the purpose of determining effects), and "unique archaeological resources." An archaeological resource is considered "unique" (Section 21083.2(g)) when the resource not merely adds to the current body of knowledge, but when there is a high probability that the resource also:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

6. PROJECT EFFECTS

A project may have a significant impact or adverse effect on cultural resources/historic properties if the project will or could result in the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance or values of the historic resource would be materially impaired. Actions that would materially impair a cultural resource or historic property are actions that would alter or diminish those attributes of a site that qualify the site for inclusion in State site registers or the National Register of Historic Places.

Based on the specific findings detailed above under ***Cultural Resources Survey and Cultural Inventory***, no historic properties are present within the project area and no historic properties will be affected by the undertaking, as presently proposed. Likewise, no significant historical resources, or unique archaeological resources are located within the APE.

7. NATIVE AMERICAN CONSULTATION

Consultation was undertaken with the Native American Heritage Commission (NAHC) re. sacred land listings for the property. An information request letter was delivered to the NAHC on May 16, 2019. With no response, a second request letter was submitted to the NAHC on May 28, 2019. To date, no response has been received from the NAHC.

8. PROJECT SUMMARY

This report details the results of a cultural resources inventory survey of approximately 1.69-acres of land comprised of relatively flat terrain, adjacent to the east side of State Route 49, a short distance north of Georgetown Road, in the community of Cool, in El Dorado County, California.

The proponent proposes commercial development of the property, an action that would likely involve construction of a commercial structure, parking, utilities, access and landscaping.

Existing records at the NCIC document that approximately 90% of the present APE had been subjected to previous archaeological investigation, and that aside from a mapping error no prehistoric or historic-era sites had been documented within the APE. As well, the present effort included an intensive-level pedestrian survey. The pedestrian survey failed to identify any prehistoric or historic-era sites within the APE.

Consultation was undertaken with the Native American Heritage Commission (NAHC) re. sacred land listings for the property. An information request letter was delivered to the NAHC on May 16, 2019. With no response, a second request letter was submitted to the NAHC on May 28, 2019. To date, no response has been received from the NAHC.

Based on the absence of significant historical resources/unique archaeological resources/historic properties within the APE, archaeological clearance is recommended for the project/undertaking as presently proposed, although the following general provisions are considered appropriate:

1. ***Consultation in the event of inadvertent discovery of cultural material***: The present evaluation and recommendations are based on the findings of an inventory-level surface survey only. There is always the possibility that important unidentified cultural materials could be encountered on or below the surface during the course of future construction activities. This possibility is particularly relevant considering the constraints generally to archaeological field survey, and particularly where past ground disturbance activities (e.g., logging, ranching, soil deposition) have obscured historic ground surface visibility, as in the present case. In the event of an inadvertent discovery of previously unidentified cultural material, archaeological consultation should be sought immediately.

2. ***Consultation in the event of inadvertent discovery of human remains***: In the event that human remains are inadvertently encountered during trenching or other ground-disturbing activity or at any time subsequently, State law shall be followed, which includes, but is not limited to, immediately contacting the County Coroner's office upon any discovery of human remains.

9. REFERENCES CITED and/or UTILIZED

Advisory Council on Historic Preservation
1980 *Advisory Council's Treatment of Archaeological Properties: A Handbook, Draft Guidelines 1980/1985*. Washington.

Bass, Henry
1987 *Historic Property Survey Report for a Proposed Roadway Improvement Project on State Highway 49 Between Pilot Hill and Cool, El Dorado County, California 03-ED-49 Post Mile 31.3/34.8*. Report on File, North Central Information Center, CSU-Sacramento (NCIC Report # 8084).

Baumhoff, Martin A.
1963 Ecological Determinants of Aboriginal California Populations. *University of California Publications in American Archaeology and Ethnology* 49(2):155-236. Berkeley and Los Angeles.

Billat, Loma
2001 *Gillespie (CA-04871S)*. Report on File, North Central Information Center, CSU-Sacramento (NCIC Report # 7388).

2004 *Cool/CA-3006A*. Report on File, North Central Information Center, CSU-Sacramento (NCIC Report # 7390).

Burcham, L.T.
1957 *California Range Land: An Historico-Ecological Study of the Range Resources of California*. California Division of Forestry, Department of Natural Resources. Sacramento.

California, State of
1970 *Public Resources Code, Section 21000, et seq. (CEQA), and The California Environmental Quality Act Guidelines, California Administrative Code, Section 15000 et seq. (Guidelines, as Amended)*. Prepared by the Office of Planning and Research.

1976 *The California Inventory of Historic Resources*. State of California.

1990 *The California Historical Landmarks*. State of California.

1992 *California Points of Historical Interest*. State of California.

Clark, William B.
1970 Gold Districts of California. *California Division of Mines, Bulletin 193*. San Francisco, California.

Code of Federal Regulations (CFR)

36 CFR Part 60: *National Register of Historic Places*. Washington, D.C.: Department of the Interior, National Park Service.

36 CFR Part 66: *Proposed Guidelines – Recovery of Scientific, Prehistoric, Historic, and Archaeological Data: Methods, Standards, and Reporting Requirements*. Washington, D.C.: Department of the Interior, National Park Service.

Cook, S. F.

1955 The Aboriginal Population of the San Joaquin Valley, California. *University of California Publications, Anthropological Records*, Vol. 16:31-80. Berkeley and Los Angeles.

Crawford, J. J.

1896 Thirteenth report of the State Mineralogist: *California Mining Bureau, Report 13*.

Fredrickson, D. A.

1974 Cultural Diversity in Early Central California: A View from the North Coast Ranges. *Journal of California Anthropology* 1(1):41-53. Davis, California.

Gudde, Erwin G.

1969 *California Place Names: The Origin and Etymology of Current Geographical Names*. University of California Press. Berkeley.

1975 *California Gold Camps*. University of California Press. Berkeley.

Heizer, R. F.

1938 A Folsom-type point from the Sacramento Valley. Los Angeles: *The Masterkey* 12(5):180-182.

Hines, Philip

2010 *Cultural Resource Survey for Cool Parking Lot Gate Relocation Project*. Report on File, North Central Information Center, CSU-Sacramento (NCIC Report # 10728).

Historic Resource Associates

2000 *Cultural Resources Study for the Proposed Cool Exxon/Chevron Mini-Mart/Taco Bell Express in Cool*. Report on File, North Central Information Center, CSU-Sacramento (NCIC Report # 7378).

2004 *Cultural Resources Study of APN 071:091:47, Cool Country Office Building in Cool*. Report on File, North Central Information Center, CSU-Sacramento (NCIC Report # 7389).

2008 *Cultural Resources Study of Assessor's Parcel No. 71:500:35, Cool, El Dorado County, California 95614*. Report on File, North Central Information Center, CSU-Sacramento (NCIC Report # 9698).

Holland, R. F.
1986 *Preliminary Descriptions of the Terrestrial Natural Communities of California*. California Department of Fish and Game.

Humphreys, Stephen E.
1969 *The Archaeology of New Bullards Bar*. Ms. Prepared for National Parks Service. Report on File, North Central Information Center, CSU-Sacramento.

Moratto, Michael J.
2004 *California Archaeology*. Academic Press. Orlando, Florida.

Leach-Palm, Laura, Bryan Larson, Paul Brandy, Jay King, Lindsay Hartman, and Pat Mikkelsen
2008 *Cultural Resources Inventory of Caltrans District 3 Rural Conventional Highways in Butte, Colusa, El Dorado, Glenn, Nevada, Placer, Sacramento, Sierra, Sutter, Yolo and Yuba Counties*. Report on File, North Central Information Center, CSU-Sacramento (NCIC Report # 9326).

O'Connor, Denise
1987 *Historical Architectural Survey Report for a Proposed Roadway Improvement Project on State Highway 49 Between Pilot Hill and Cool, El Dorado County*. Report on File, North Central Information Center, CSU-Sacramento (NCIC Report # 8084C).

Ornduff, R.
1974 *Introduction to California Plant Life*. University of California Press. Berkeley and Los Angeles.

Peak, Melinda
2008 *Extended Phase I (XPI) Testing Proposal, CAL-ELD-2374-H, Northside Bike Path Project*. Report on File, North Central Information Center, CSU-Sacramento (NCIC Report # 10547C).

2009 *Historic Property Survey Report for the Northside Bicycle Path Project*. Report on File, North Central Information Center, CSU-Sacramento (NCIC Report # 10547).

2009 *Archaeological Survey Report and Extended Phase I Report for the Northside Trail Project*. Report on File, North Central Information Center, CSU-Sacramento (NCIC Report # 10547B).

2009 *Historical Resources Evaluation Report for the Northside Trail Project*. Report on File, North Central Information Center, CSU-Sacramento (NCIC Report # 10547D).

Pemberton, H. E.
1983 *Minerals of California*. Van Nostrand Reinhold Press, New York, NY.

Ragir, Sonia
1972 The Early Horizon in Central California Prehistory. *Contributions of the University of California Archaeological Research Facility*. University of California, Berkeley.

Storer, T.J. and R.K. Usinger
1963 *Sierra Nevada Natural History*. University of California Press, Berkeley.

Supernowicz, Dana
1990 *Archaeological Survey Report of Assessors Parcel Number 71:090:27 Near Cool, El Dorado County, California*. Report on File, North Central Information Center, CSU-Sacramento (NCIC Report # 732).

1992 *Archaeological Survey Report for the Brown-Threlkel Ranch; A Proposed Development at Cool, El Dorado County, CA*. Report on File, North Central Information Center, CSU-Sacramento (NCIC Report # 7381).

1992 *Archaeological Survey Report for Assessor's Parcel No. 71:090:77; A Proposed Development at Cool, El Dorado County, CA*. Report on File, North Central Information Center, CSU-Sacramento (NCIC Report # 7383).

1993 *Archaeological Survey Report for Assessor's Parcel No. 71:090:26; A Proposed Development at Cool, El Dorado County, CA*. Report on File, North Central Information Center, CSU-Sacramento (NCIC Report # 7387).

True, D. L., and Harvey Crew
1976 *Archaeological Surveys Auburn-Folsom Knickerbocker Tract, Part II*. Report on File, North Central Information Center, CSU-Sacramento (NCIC Report # 6813).

West, James
1983 "Pollen Analysis Results," IN, *Archaeological Investigations on Pilot Ridge, Six Rivers National Forest*, by William Hildebrandt and J. Hayes, pp. 3.17-3.32. Report on File, Six Rivers National Forest, Eureka, California.

Wiant, Wayne, and Henry Bass
1986 *Archaeological Surveys Report for a Proposed Roadway Improvement Project on State Highway 49 Between Pilot Hill and Cool, El Dorado County, California*. Report on File, North Central Information Center, CSU-Sacramento (NCIC Report # 8084B).

Wilson, N. L. and A. H. Towne
1978 Nisenan. In *Handbook of North American Indians, Volume 8: California*, Robert F. Heizer, editor. Smithsonian Institution, Washington, D. C. 1978.

Windmiller, Ric, and Jane Russell
1997 *Cultural Resources Inventory Pilot Hill Ranch Water Treatment Facility and Off-Site Water Line Corridors, El Dorado County, California.* On File, North Central Information Center, CSU-Sacramento (NCIC Report # 8086).

CULTURAL RESOURCES INVENTORY SURVEY

Cool Development Project
circa 1.69-acres
El Dorado County, California.

ATTACHMENTS

- Figure 1: Area of Potential Effects Map
- Records Search from North Central Information Center
- Consultation letter to the Native American Heritage Commission (NAHC)

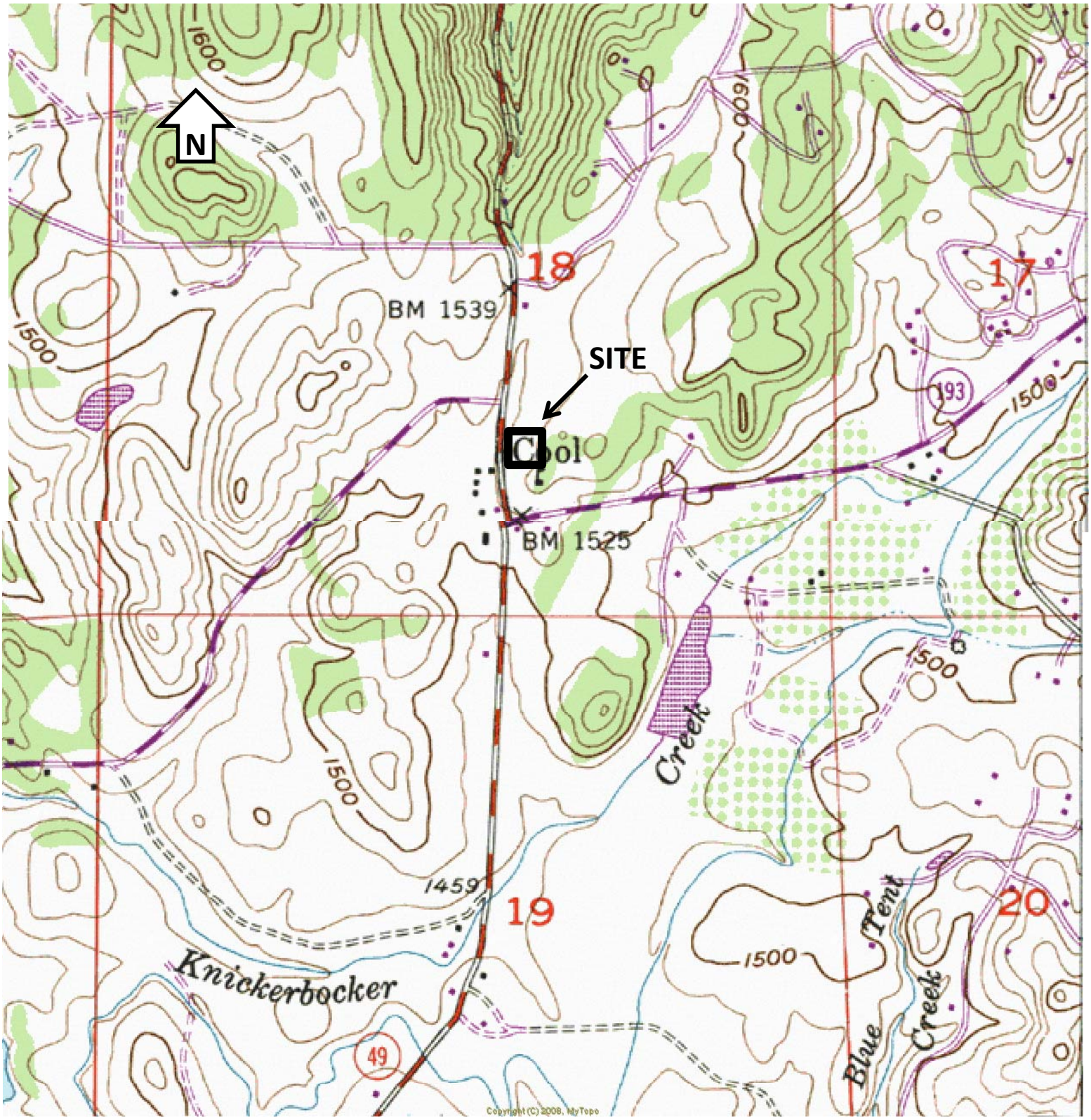


Figure 1: Area of Potential Effects (APE). APN 071-500-037, property located at 1020 Northside Drive, Cool, CA 95614-5000. An undeveloped ±1.69-acre parcel centered on 38.888346N, -121.015647W. Section 18, Township 12 North, Range 9 East, Auburn 7.5' Quadrangle.

California Historical Resources Information System

NORTH CENTRAL INFORMATION CENTER

AMADOR
EL DORADO
NEVADA
PLACER
SACRAMENTO
YUBA

California State University, Sacramento
6000 J Street, Folsom Hall, Suite 2042
Sacramento, California 95819-6100
phone: (916) 278-6217
fax: (916) 278-5162
email: ncic@csus.edu

5/22/2019 NCIC File No.: ELD-19-56

Sean Jensen
Genesis Society
127 Estates Drive
Chico, CA 95928

Re: Cool Development Project

The North Central Information Center received your record search request for the project area referenced above, located on the Auburn USGS 7.5' quad. The following reflects the results of the records search for the project area and a ¼-mi radius.

As indicated on the data request form, the locations of resources and reports are provided in the following format: ☒ custom GIS maps ☐ shapefiles

Resources within project area: Resources outside project area, within radius:	P-09-3627 P-09-3629 P-09-3632 P-09-3633 P-09-5875
Reports within project area: Reports outside project area, within radius:	7378 8084 9326 732 6813 7381 7383 7387 7388 7389 7390 8086 9698 10547 10728

Resource Database Printout (list): ☒ enclosed ☐ not requested ☐ nothing listed/NA

Resource Database Printout (details): ☐ enclosed ☒ not requested ☐ nothing listed/NA

Resource Digital Database Records: ☐ enclosed ☒ not requested ☐ nothing listed/NA

Report Database Printout (list): ☒ enclosed ☐ not requested ☐ nothing listed/NA

Report Database Printout (details): ☐ enclosed ☒ not requested ☐ nothing listed/NA

Report Digital Database Records: ☐ enclosed ☒ not requested ☐ nothing listed/NA

Resource Record Copies: ☒ enclosed ☐ not requested ☐ nothing listed/NA

Report Copies: ☒ enclosed ☐ not requested ☐ nothing listed/NA

OHP Historic Properties Directory:	☒ enclosed	☐ not requested	☐ nothing listed/NA
Archaeological Determinations of Eligibility:	☒ enclosed	☐ not requested	☐ nothing listed/NA
CA Inventory of Historic Resources (1976):	☒ enclosed	☐ not requested	☐ nothing listed/NA
Caltrans Bridge Survey:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Ethnographic Information:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Historical Literature:	☒ enclosed	☐ not requested	☐ nothing listed/NA
Historical Maps:	☒ enclosed	☐ not requested	☐ nothing listed/NA
Local Inventories:	☐ enclosed	☐ not requested	☒ nothing listed/NA
GLO and/or Rancho Plat Maps:	☒ enclosed	☐ not requested	☐ nothing listed/NA
Shipwreck Inventory:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Soil Survey Maps:	☐ enclosed	☐ not requested	☒ nothing listed/NA

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Sincerely,

Paul Rendes, Assistant Coordinator
North Central Information Center

GENESIS SOCIETY

a Corporation Sole

127 ESTATES DRIVE
CHICO, CALIFORNIA 95928
(530) 680-6170
seanjensen@comcast.net

May 16, 2019

Native American Heritage Commission

1550 Harbor Boulevard,
West Sacramento, California 95691

Subject: ***Cool Development Project, circa 1.69-acres, El Dorado County, California.***

Dear Commission:

We have been requested to conduct an archaeological survey, for the above-cited project, and are requesting any information you may have concerning archaeological sites or traditional use areas for this area. Any information you might supply will be used to supplement the archaeological and historical study being prepared for this project.

Project Name:	Cool Development Project, circa 1.69-acres
County:	El Dorado
Map:	USGS Auburn, 7.5'
Location:	Portion of Section 18 of T12N, R9E

Thanks in advance for your assistance.

Regards,

Sean Michael Jensen

Sean Michael Jensen, Administrator

Appendix G

Preliminary Geotechnical Report

Earth Strata Geotechnical Services, Inc.
Geotechnical, Environmental and Materials Testing Consultants

September 27, 2019

Project No. 192774-10A

Mr. Steve Powell
WOODCREST COMPANIES
1410 Main Street, Suite C,
Ramona, CA 92065

Subject: **Preliminary Geotechnical Interpretive Report, Proposed Commercial Building, Assessor's Parcel Number 071-500-037, Located South of Northside Drive, Cool City Area, El Dorado County, California**

Earth Strata Geotechnical Services is pleased to present our preliminary geotechnical interpretive report for the proposed commercial building, Assessor's Parcel Number 071-500-037, located south of Northside Drive in the Cool area of El Dorado County, California. This work was performed in accordance with the scope of work described in our proposal, dated June 24, 2019. The purpose of this study is to evaluate the nature, distribution, engineering properties, and geologic strata underlying the site with respect to the proposed development.

Earth Strata Geotechnical Services appreciates the opportunity to offer our consultation and advice on this project. In the event that you have any questions, please do not hesitate to contact the undersigned at your earliest convenience.

Respectfully submitted,

EARTH STRATA GEOTECHNICAL SERVICES

Stephen M. Poole, PE, GE
Principal Engineer

REGISTERED PROFESSIONAL ENGINEER
STEPHEN MICHAEL POOLE
No. 692
GEOTECHNICAL
STATE OF CALIFORNIA

Aaron G. Wood, PG, CEG
Principal Geologist

CERTIFIED ENGINEERING GEOLOGIST
AARON G. WOOD
No. 2550
Exp. 6/30/21
STATE OF CALIFORNIA

SMP/jf

Distribution: (2) Addressee

TABLE OF CONTENTS

Section **Page**

INTRODUCTION 1
SITE DESCRIPTION 1
PROPOSED DEVELOPMENT AND GRADING 1
FIELD EXPLORATION AND LABORATORY TESTING 3
Field Exploration 3
Laboratory Testing 3
FINDINGS 3
Regional Geology 3
Local Geology 4
Faulting 6
Landslides 6
CONCLUSIONS AND RECOMMENDATIONS 6
General 6
Earthwork 7
Earthwork and Grading 7
Clearing and Grubbing 7
Excavation Characteristics 7
Groundwater 7
Ground Preparation for Fill Areas 7
Oversize Rock 8
Compacted Fill Placement 8
Import Earth Materials 8
Cut/Fill Transitions 9
Cut Areas 10
Shrinkage, Bulking and Subsidence 10
Geotechnical Observations 10
Post Grading Considerations 11
Slope Landscaping and Maintenance 11
Site Drainage 11
Utility Trenches 11
SEISMIC DESIGN CONSIDERATIONS 12
Ground Motions 12
Secondary Seismic Hazards 13
Liquefaction and Lateral Spreading 13
General 13
Allowable Bearing Values 13
Settlement 14
Lateral Resistance 14
Structural Setbacks and Building Clearance 14
Foundation Observations 15
Expansive Soil Considerations 16
Very High Expansion Potential (Expansion Index of 131 or Greater) 16
Footings 16
Building Floor Slabs 16

Post Tensioned Slab/Foundation Design Recommendations.....18
Corrosivity.....19
RETAINING WALLS.....20
Active and At-Rest Earth Pressures.....20
Subdrain System.....21
Temporary Excavations.....21
Retaining Wall Backfill.....22
CONCRETE FLATWORK.....22
Thickness and Joint Spacing.....22
Subgrade Preparation.....22
PRELIMINARY ASPHALTIC CONCRETE PAVEMENT DESIGN.....22
GRADING PLAN REVIEW AND CONSTRUCTION SERVICES.....23
REPORT LIMITATIONS.....23

Attachments:

Figure 1 – Vicinity Map (Page 2)
Figure 2 – Regional Geologic Map (Page 5)
APPENDIX A – References (Rear of Text)
APPENDIX B – Exploratory Logs (Rear of Text)
APPENDIX C – Laboratory Procedures and Test Results (Rear of Text)
APPENDIX D – Seismicity (Rear of Text)
APPENDIX E - Asphaltic Concrete Pavement Calculations (Rear of Text)
APPENDIX F – General Earthwork and Grading Specifications (Rear of Text)
Plate 1 – Geotechnical Map (In Pocket)

INTRODUCTION

Earth Strata Geotechnical Services is pleased to present our preliminary geotechnical interpretive report for the proposed development. The purpose of this study was to evaluate the nature, distribution, engineering properties, and geologic strata underlying the site with respect to the proposed development, and then provide preliminary grading and foundation design recommendations based on the plans you provided. The general location of the subject property is indicated on the Vicinity Map, Figure 1. The plans you provided were used as the base map to show geologic conditions within the subject site, see Geotechnical Map, Plate 1.

SITE DESCRIPTION

The subject property is located on the south side of Northside Drive in the Cool area of El Dorado County, California. The approximate location of the site is shown on the Vicinity Map, Figure 1.

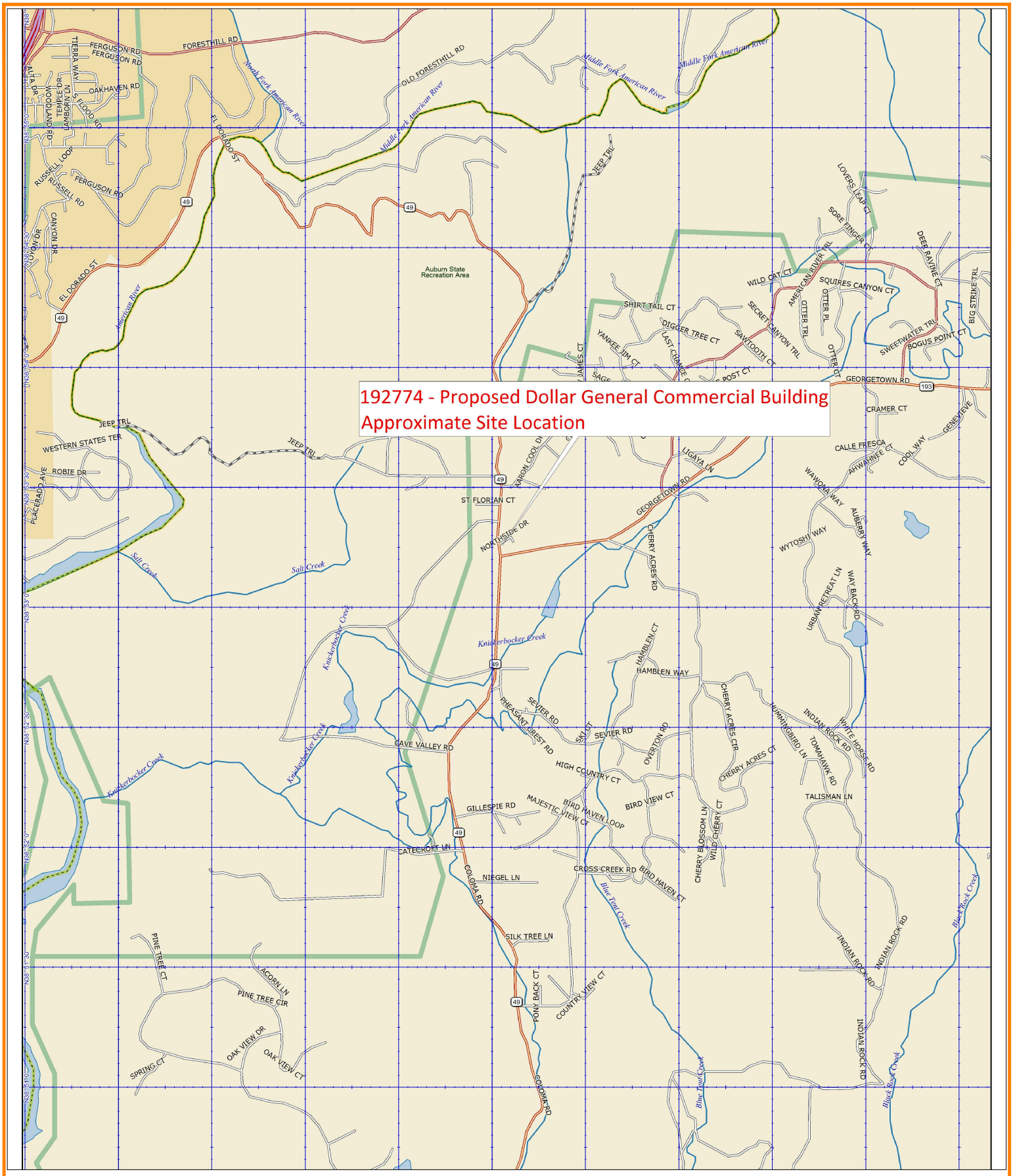
The subject property is comprised of approximately 1.69 acres of undeveloped land. The site has not been graded. Topographic relief at the subject property is relatively low with the terrain being generally sloping to flat. Elevations at the site range from approximately 1525 to 1555 feet above mean sea level (msl), for a difference of about 30± feet across the entire site. Drainage within the subject property generally flows to the southeast

The site is currently bordered by commercial development to the north, east, and west, as well as vacant property to the south. Most of the vegetation on the site consists of moderate amounts of annual weeds/grasses, along with small to large trees scattered throughout the subject site.

PROPOSED DEVELOPMENT AND GRADING

The proposed commercial development is expected to consist of concrete, wood or steel framed one- and/or two-story structures utilizing slab on grade construction with associated streets, landscape areas, and utilities. The current development plans include one building positioned on the site.

The plans provided by you were utilized in our exploration and form the base for our Geotechnical Map, Plate 1. The plans call for proposed cut slopes on the order of 10 feet high and fill slopes on the order of 10 feet high.



"© 2007 DeLorme (www.delorme.com) Topo USA®".

Earth Strata Geotechnical Services, Inc.
Geotechnical, Environmental and Materials Testing Consultants
www.ESGSINC.com (951) 397-8315

PROPOSED DOLLAR GENERAL COMMERCIAL BUILDING | 192774-10A

VICINITY MAP

SCALE 1:40,625

SEP 2019 | FIGURE 1

FIELD EXPLORATION AND LABORATORY TESTING

Field Exploration

Subsurface exploration within the subject site was performed on August 13, 2019 for the exploratory excavations. A truck mounted hollow-stem-auger drill rig was utilized to drill three (3) borings throughout the site to a maximum depth of 5 feet. An underground utilities clearance was obtained from Underground Service Alert of Southern California, prior to the subsurface exploration.

Earth materials encountered during exploration were classified and logged in general accordance with the Standard Practice for Description and Identification of Soils (Visual-Manual Procedure) of ASTM D 2488. Upon completion of laboratory testing, exploratory logs and sample descriptions may have been reconciled to reflect laboratory test results with regard to ASTM D 2487.

Associated with the subsurface exploration was the collection of bulk (disturbed) samples and relatively undisturbed samples of earth materials for laboratory testing and analysis. The relatively undisturbed samples were obtained with a 3 inch outside diameter modified California split-spoon sampler lined with 1-inch-high brass rings. Samples obtained using a hollow stem auger drill rig, were mechanically driven with successive 30 inch drops of a 140-pound automatic trip safety hammer. The blow count per one-foot increment was recorded in the boring logs. The central portions of the driven samples were placed in sealed containers and transported to our laboratory for testing and analysis. The approximate exploratory locations are shown on Plate 1 and descriptive logs are presented in Appendix B.

Laboratory Testing

Maximum dry density/optimum moisture content, expansion potential, R-value, pH, resistivity, sulfate content, chloride content, and in-situ density/moisture content were determined for selected undisturbed and bulk samples of earth materials, considered representative of those encountered. An evaluation of the test data is reflected throughout the Conclusions and Recommendations section of this report. A brief description of laboratory test criteria and summaries of test data are presented in Appendix C.

FINDINGS

Regional Geology

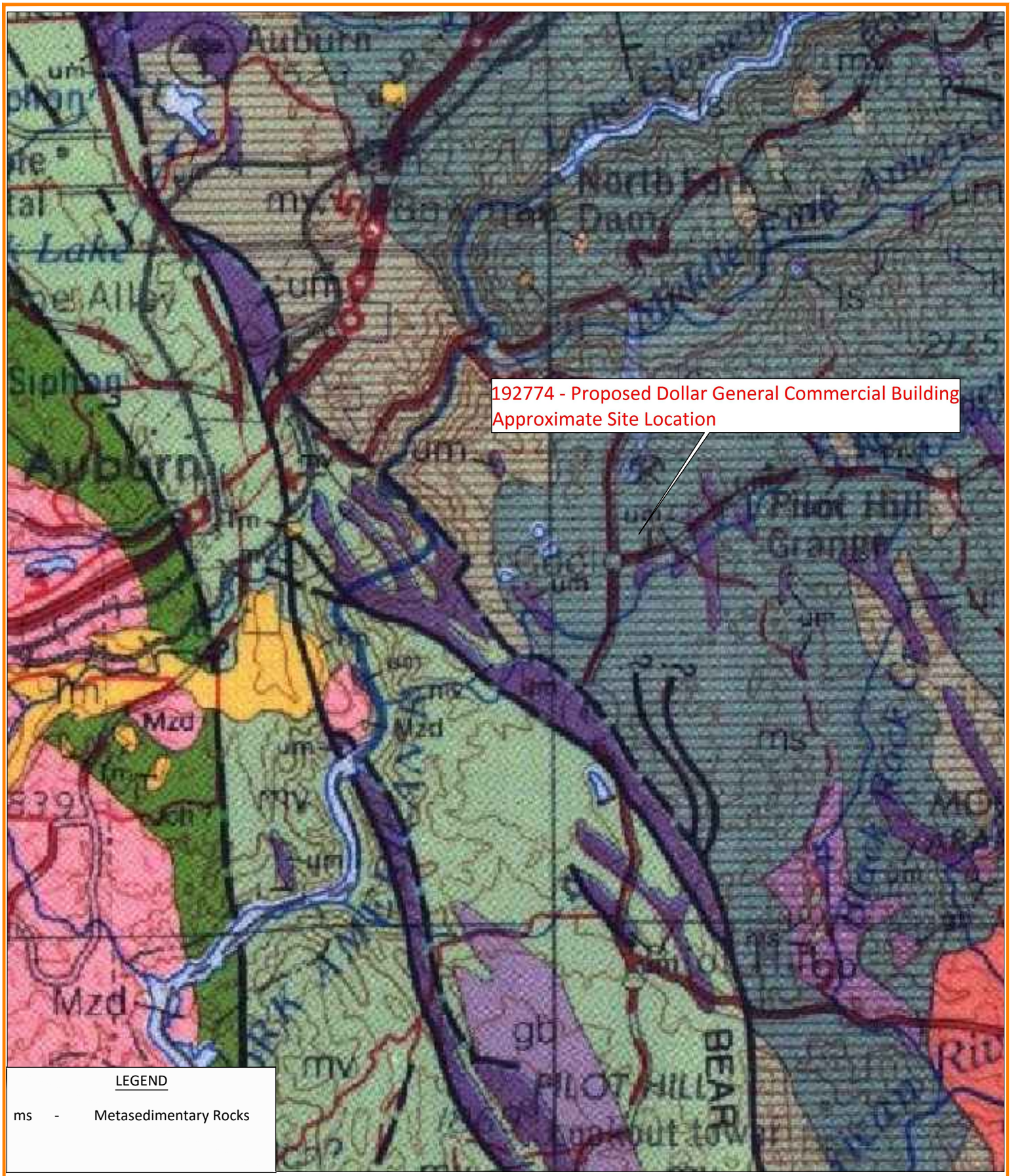
Regionally, the site is located in the Sierra Nevada Province of California. The Sierra Nevada Province is located in the east central portion of the state with the left lateral, vertical Garlock Fault making up the southern boundary of the province. The province is characterized by a northwest trending mountain range. Due to a lesser predominance of alluvial cover, the Sierra Nevada Province has great exposures of bedrock units. The topography ranges from 400 to 14,496 feet with many peaks on the order of 9,000 to 12,000 feet. The rocks that make up the Sierra Nevada Province primarily consist of metasedimentary basement rocks intruded by the Sierra Nevada batholith. The character of the providence is primarily derived from the intrusive Sierra Nevada batholith that ranges in age from the Triassic to Cretaceous and extends westward under the Great Valley. The modern topographic features are tied to the properties of bedrock and tectonic history of any particular location. A map of the regional geology is presented on the Regional Geologic Map, Figure 2.

Local Geology

The earth materials on the site are primarily comprised of artificial fill and bedrock. A general description of the dominant earth materials observed on the site is provided below:

- Artificial Fill, Undocumented (map symbol Afu): Undocumented artificial fill materials were encountered throughout the site within the upper 2 feet during exploration. These materials are typically locally derived from the native materials and consist generally of yellowish brown to yellowish red, clayey sand and clay. These materials are generally inconsistent, poorly consolidated fills.

- Mesozoic Metasedimentary Rocks (map symbol ms): Mesozoic metasedimentary rocks were encountered throughout the site beneath the undocumented artificial fill. This unit was generally noted to be slightly to very weathered, dry to slightly moist, and moderately hard to very hard. Typically, the upper 1 to 3 feet of this unit is more weathered and not as hard.



LEGEND

ms - Metasedimentary Rocks

REFERNCES: Wagner, D.L., Jennings, C.W., Bedrossian, T.L., and Bortugno, E.J., 1981, Geologic map of the Sacramento quadrangle, California, 1:250,000: California Division of Mines and Geology, Regional Geologic Map 1A, scale 1:250,000.

"© 2007 DeLorme (www.delorme.com) Topo USA®".

Earth Strata Geotechnical Services, Inc.
Geotechnical, Environmental and Materials Testing Consultants
www.ESGSINC.com (951) 397-8315

PROPOSED DOLLAR GENERAL COMMERCIAL BUILDING		192774-10A
REGIONAL GEOLOGIC MAP	NOT TO SCALE	
	SEP 2019	FIGURE 2

Faulting

The project is located in a seismically active region and as a result, significant ground shaking will likely impact the site within the design life of the proposed project. The geologic structure of the entire southern California area is dominated by northwest-trending faults associated with the San Andreas Fault system, which accommodates for most of the right lateral movement associated with the relative motion between the Pacific and North American tectonic plates. Known active faults within this system include the Newport-Inglewood, Whittier-Elsinore, San Jacinto and San Andreas Faults.

No active faults are known to project through the site and the site is not located within an Alquist-Priolo Earthquake Fault Zone, established by the State of California to restrict the construction of new habitable structures across identifiable traces of known active faults. An active fault is defined by the State of California as having surface displacement within the past 11,000 years or during the Holocene geologic time period. Based on our mapping of the subject site, review of current and historical aerial imagery, lack of lineaments indicative of active faulting, and the data compiled during the preparation of this report, it is our interpretation that the potential for surface rupture to adversely impact the proposed structures is very low to remote.

Based on our review of regional geologic maps and applicable computer programs (USGS 2008 Interactive Deaggregation, Caltrans ARS online, and USGS Earthquake Hazard Programs), the Foothills Fault System with an approximate source to site distance of 6.02 kilometers is the closest known active fault anticipated to produce the highest ground accelerations, with an anticipated maximum modal magnitude of 6.3. A list of faults as well as a list of significant historical seismic events within a 100km radius of the subject site are included in Appendix D.

Landslides

Landslide debris was not observed during our subsurface exploration and no ancient landslides are known to exist on the site. No landslides are known to exist, or have been mapped, in the vicinity of the site. Geologic mapping of the site conducted during our investigation, and review of aerial imagery of the site, reveal no geomorphic expressions indicative of landsliding. The materials encountered in the pad area were found to be very hard and no oversteepened slopes exist on the site or are proposed.

CONCLUSIONS AND RECOMMENDATIONS

General

From geotechnical and engineering geologic points of view, the subject property is considered suitable for the proposed development, provided the following conclusions and recommendations are incorporated into the plans and are implemented during construction.

Earthwork

Earthwork and Grading

The provisions of the 2016 California Building Code (CBC), including the General Earthwork and Grading Specifications in the last Appendix of this report, should be applied to all earthwork and grading operations, as well as in accordance with all applicable grading codes and requirements of the appropriate reviewing agency. Unless specifically revised or amended herein, grading operations should also be performed in accordance with applicable provisions of our General Earthwork and Grading Specifications within the last appendix of this report.

Clearing and Grubbing

Vegetation including trees, grasses, weeds, brush, shrubs, or any other debris should be stripped from the areas to be graded and properly disposed of offsite. In addition, laborers should be utilized to remove any roots, branches, or other deleterious materials during grading operations.

Earth Strata Geotechnical Services should be notified at the appropriate times to provide observation and testing services during Clearing and Grubbing operations. Any buried structures or unanticipated conditions should be brought to our immediate attention.

Excavation Characteristics

Based on the results of our exploration and experience with similar projects in similar settings, the near surface earth materials, will be readily excavated with conventional earth moving equipment. Excavation difficulty is a function of the degree of weathering and amount of fracturing within the bedrock. Bedrock generally becomes harder and more difficult to excavate with increasing depth.

Groundwater

Groundwater was not observed during our subsurface exploration. It should be noted that localized groundwater could be encountered during grading due to the limited number of exploratory locations or other factors.

Ground Preparation for Fill Areas

For each area to receive compacted fill, the removal of low density, compressible earth materials, such as undocumented artificial fill, should continue until firm competent bedrock is encountered. Removal excavations are subject to verification by the project engineer, geologist or their representative. Prior to placing compacted fills, the exposed bottom in each removal area should be scarified to a depth of 6 inches or more, watered or air dried as necessary to achieve near optimum moisture conditions and then compacted to a minimum of 90 percent of the maximum dry density determined by ASTM D 1557.

The intent of remedial grading is to diminish the potential for hydro-consolidation, slope instability, and/or settlement. Remedial grading should extend beyond the perimeter of the proposed structures a horizontal distance equal to the depth of excavation or a minimum of 5 feet, whichever

is greater. For cursory purposes the anticipated removal depths are shown on the enclosed Geotechnical Map, Plate 1. In general, the anticipated removal depths should vary from 1 to 3 feet below existing grade in the southern portion of the site and from 4 to 6 feet below ground surface in the northern portion of the site.

Wet Removals

Wet alluvial materials will probably not be encountered within the low lying areas of the site. If removals of wet alluvial materials are required, special grading equipment and procedures can greatly reduce overall costs. Careful planning by an experienced grading contractor can reduce the need for special equipment, such as swamp cats, draglines, excavators, pumps, and top loading earthmovers. Possible solutions may include the placement of imported angular rock and/or geotextile ground reinforcement. More specific recommendations can be provided based on the actual conditions encountered. Drying or mixing of wet materials with dry materials will be needed to bring the wet materials to near optimum moisture prior to placing wet materials into compacted fills.

Oversize Rock

Oversize rock is not expected to be encountered during grading. Oversize rock that is encountered (i.e., rock exceeding a maximum dimension of 12 inches) should be disposed of offsite or stockpiled onsite and crushed for future use. The disposal of oversize rock is discussed in greater detail in General Earthwork and Grading Specifications within the last appendix of this report.

Compacted Fill Placement

Compacted fill materials should be placed in 6 to 8 inch maximum (uncompacted) lifts, watered or air dried as necessary to achieve uniform near optimum moisture content and then compacted to a minimum of 90 percent of the maximum dry density determined by ASTM D 1557.

Import Earth Materials

Should import earth materials be needed to achieve final design grades, all potential import materials should be free of deleterious/oversize materials, non-expansive, and approved by the project geotechnical consultant prior to delivery onsite.

Fill Slopes

When properly constructed, fill slopes up to 10 feet high with inclinations of 2:1 (h:v) or flatter are considered to be grossly stable. Keyways are required at the toe of all fill slopes higher than 5 feet and steeper than 5:1 (h:v). Keyways should be a minimum of 10 feet wide and 2 feet into bedrock earth materials, as measured on the downhill side. In order to establish keyway removals, backcuts should be cut no steeper than 1:1 or as recommended by the geotechnical engineer or engineering geologist. Compacted fill should be benched into bedrock earth materials.

Cut Slopes

When properly constructed, cut slopes into bedrock up to 10 feet high with inclinations of 2:1 (h:v) or flatter are considered grossly stable. Cut slopes should be observed by the engineering geologist or his representative during grading, but are anticipated to be stable.

Stabilization Fills

Currently, stabilization fills will not be required for cut slopes in the bedrock. Our engineering geologist or his representative should be called to evaluate all slopes during grading. In the event that unfavorable geologic conditions are encountered, recommendations for stabilization fills or flatter slopes will be provided.

Fill Over Cut Slopes

The fill portion of fill over cut slopes should not be constructed until the cut portion of the slope has been cut to finish grade. The earth materials and geologic structure exposed along the cut slope should be evaluated with regard to suitability for compacted fills or foundations and for stability. If the cut materials are determined to be competent, then the construction of the keyway and subdrain system may commence or additional remedial recommendations will be provided.

Temporary Backcuts

It is the responsibility of the grading contractor to follow all Cal-OSHA requirements with regard to excavation safety. Where existing developments are upslope, adequate slope stability to protect those developments must be maintained. Temporary backcuts will be required to accomplish removals of unsuitable materials and possibly, to perform canyon removals, stabilization fills, and/or keyways. Backcuts should be excavated at a gradient of 1:1 (h:v) or flatter. Flatter backcuts may be required where geologic structure or earth materials are unfavorable. It is imperative that grading schedules minimize the exposure time of the unsupported excavations. All excavations should be stabilized within 30 days of initial excavation.

Cut/Fill Transitions

Cut/fill transitions should be eliminated from all building areas where the depth of fill placed within the "fill" portion exceeds proposed footing depths. This is to diminish distress to structures resulting from excessive differential settlement. The entire foundation of each structure should be founded on a uniform bearing material. This should be accomplished by overexcavating the "cut" portion and replacing the excavated materials as properly compacted fill. Refer to the following table for recommended depths of overexcavation.

DEPTH OF FILL ("fill" portion)	DEPTH OF OVEREXCAVATION ("cut" portion)
Up to 5 feet	Equal Depth
5 to 10 feet	5 feet
Greater than 10 feet	One-half the thickness of fill placed on the "fill" portion (10 feet maximum)

Overexcavation of the "cut" portion should extend beyond the building perimeter a horizontal distance equal to the depth of overexcavation or a minimum of 5 feet, whichever is greater.

Cut Areas

In cut areas, an area a minimum of 5 feet beyond the footprint of the proposed structures should overexcavated until; competent bottoms are achieved; to a minimum 3 feet below the proposed foundations; or per the Overexcavation Table above; (whichever is greater) and replaced with compacted fill. Final determination of areas that require overexcavation should be determined in the field by a representative of Earth Strata Geotechnical Services.

Shrinkage, Bulking and Subsidence

Volumetric changes in earth material quantities will occur when poorly consolidated earth materials are replaced with properly compacted fill. Estimates of the percent shrinkage/bulking factors for the various geologic units observed on the subject property are based on in-place densities and on the estimated average percent of relative compaction achieved during grading.

GEOLOGIC UNIT	SHRINKAGE (%)
Artificial Fill	10 to 15
Bedrock	0 to 5 (Bulking)

Subsidence from scarification and recompaction of exposed bottom surfaces is expected to be negligible to approximately 0.01 foot.

The estimates of shrinkage/bulking and subsidence are intended as an aid for project engineers in determining earthwork quantities. Since many variables can affect the accuracy of these estimates, they should be used with caution and contingency plans should be in place for balancing the project.

Geotechnical Observations

Clearing operations, removal of unsuitable materials, and general grading procedures should be observed by the project geotechnical consultant or his representative. No compacted fill should be placed without observations by the geotechnical consultant or his representative to verify the adequacy of the removals.

The project geotechnical consultant or his representative should be present to observe grading operations and to check that minimum compaction requirements and proper lift thicknesses are being met, as well as to verify compliance with the other recommendations presented herein.

Post Grading Considerations

Slope Landscaping and Maintenance

Adequate slope and building pad drainage is essential for the long term performance of the subject site. The gross stability of graded slopes should not be adversely affected, provided all drainage provisions are properly constructed and maintained. Engineered slopes should be landscaped with deep rooted, drought tolerant maintenance free plant species, as recommended by the project landscape architect.

Site Drainage

Control of site drainage is important for the performance of the proposed project. Roof gutters are recommended for the proposed structures. Pad and roof drainage should be collected and transferred to driveways, adjacent streets, storm-drain facilities, or other locations approved by the building official in non-erosive drainage devices. Drainage should not be allowed to pond on the pad or against any foundation or retaining wall. Drainage should not be allowed to flow uncontrolled over any descending slope. Planters located within retaining wall backfill should be sealed to prevent moisture intrusion into the backfill. Planters located next to structures should be sealed to the depth of the footings. Drainage control devices require periodic cleaning, testing and maintenance to remain effective.

At a minimum, pad drainage should be designed at the minimum gradients required by the CBC. To divert water away from foundations, the ground surface adjacent to foundations should also be graded at the minimum gradients required per the CBC.

Utility Trenches

All utility trench backfill should be compacted at near optimum moisture to a minimum of 90 percent of the maximum dry density determined by ASTM D 1557. For utility trench backfill within pavement areas the upper 6 inches of subgrade materials should be compacted to 95 percent of the maximum dry density determined by ASTM D 1557. This includes within the street right-of-ways, utility easements, under footings, sidewalks, driveways and building floor slabs, as well as within or adjacent to any slopes. Backfill should be placed in approximately 6 to 8 inch maximum loose lifts and then mechanically compacted with a hydro-hammer, rolling with a sheepsfoot, pneumatic tampers, or similar equipment. The utility trenches should be tested by the project geotechnical engineer or their representative to verify minimum compaction requirements are obtained.

In order to minimize the penetration of moisture below building slabs, all utility trenches should be backfilled with compacted fill, lean concrete or concrete slurry where they undercut the perimeter foundation. Utility trenches that are proposed parallel to any building footings (interior and/or exterior trenches), should not be located within a 1:1 (h:v) plane projected downward from the outside bottom edge of the footing.

SEISMIC DESIGN CONSIDERATIONS

Ground Motions

Structures are required to be designed and constructed to resist the effects of seismic ground motions as provided in the 2016 California Building Code Section 1613. The design is dependent on the site class, occupancy category I, II, III, or IV, mapped spectral accelerations for short periods (S_s), and mapped spectral acceleration for a 1-second period (S_1).

In order for structural design to comply with the 2016 CBC, the USGS "US Seismic Design Maps" online tool was used to compile spectral accelerations for the subject property based on data and maps jointly compiled by the United States Geological Survey (USGS) and the California Geological Survey (CGS). The data found in the following table is based on the Maximum Considered Earthquake (MCE) with 5% damped ground motions having a 2% probability of being exceeded in 50 years (2,475 year return period).

The seismic design coefficients were determined by a combination of the site class, mapped spectral accelerations, and occupancy category. The following seismic design coefficients should be implemented during design of the proposed structures. Summaries of the Seismic Hazard Deaggregation graphs and test data are presented in Appendix D.

2016 CBC	FACTOR
Site Location	Latitude: 38.888483° (North) Longitude: -121.015500°(West)
Site Class	D
Mapped Spectral Accelerations for short periods, S_s	0.477 g
Mapped Spectral Accelerations for 1-Second Period, S_1	0.234 g
Maximum Considered Earthquake Spectral Response Acceleration for Short Periods, S_{ms}	06.76 g
Maximum Considered Earthquake Spectral Response Acceleration for 1-Second Period, S_{m1}	0.451 g
Design Spectral Response Acceleration for Short Periods, S_{DS}	0.451 g
Design Spectral Response Acceleration for 1-Second Period, S_{D1}	0.301 g
Seismic Design Category	D
Importance Factor Based on Occupancy Category	II

We performed the probabilistic seismic hazard assessment for the site in accordance with the 2016 CBC, Section 1803.5.11 and 1803.5.12. The probabilistic seismic hazard maps and data files were jointly prepared by the United States Geological Survey (USGS) and the California Geological Survey (CGS) and can be found at the CGS Probabilistic Seismic Hazards Mapping Ground Motion Page. Actual ground shaking intensities at the site may be substantially higher or lower based on complex variables such as the near source directivity effects, depth and consistency of earth materials, topography, geologic structure, direction of fault rupture, and seismic wave reflection, refraction, and attenuation rates. The mean peak ground acceleration was calculated to be 0.237g.

Secondary Seismic Hazards

Secondary effects of seismic shaking considered as potential hazards include several types of ground failure as well as induced flooding. Different types of ground failure, which could occur as a consequence of severe ground shaking at the site, include landslides, ground lurching, shallow ground rupture, and liquefaction/lateral spreading. The probability of occurrence of each type of ground failure depends on the severity of the earthquake, distance from faults, topography, the state of subsurface earth materials, groundwater conditions, and other factors. Based on our experience, subsurface exploration, and laboratory testing, all of the above secondary effects of seismic activity are considered unlikely.

Seismically induced flooding is normally a consequence of a tsunami (seismic sea wave), a seiche (i.e., a wave-like oscillation of surface water in an enclosed basin that may be initiated by a strong earthquake) or failure of a major reservoir or retention system up gradient of the site. Since the site is at an elevation of more than 1,500 feet above mean sea level and is located more than 30 miles inland from the nearest coastline of the Pacific Ocean, the potential for seismically induced flooding due to a tsunami is considered nonexistent. Since no enclosed bodies of water lie adjacent to or up gradient of the site, the likelihood for induced flooding due to a dam failure or a seiche overcoming the dam's freeboard is considered nonexistent.

Liquefaction and Lateral Spreading

Liquefaction occurs as a result of a substantial loss of shear strength or shearing resistance in loose, saturated, cohesionless earth materials subjected to earthquake induced ground shaking. Potential impacts from liquefaction include loss of bearing capacity, liquefaction related settlement, lateral movements, and surface manifestation such as sand boils. Seismically induced settlement occurs when loose sandy soils become denser when subjected to shaking during an earthquake. The three factors determining whether a site is likely to be subject to liquefaction include seismic shaking, type and consistency of earth materials, and groundwater level. The proposed structures will be supported by compacted fill and competent bedrock. As such, the potential for earthquake induced liquefaction and lateral spreading beneath the proposed structures is considered very low to remote due to the recommended compacted fill, relatively low groundwater level, and the dense nature of the deeper onsite earth materials.

TENTATIVE FOUNDATION DESIGN RECOMMENDATIONS

General

Provided grading is performed in accordance with the recommendations of this report, shallow foundations are considered feasible for support of the proposed structures. Tentative foundation recommendations are provided herein and graphic presentations of relevant recommendations may also be included on the enclosed map.

Allowable Bearing Values

An allowable bearing value of 2,500 pounds per square foot (psf) is recommended for design of 24-inch square pad footings and 12-inch-wide continuous footings founded at a minimum depth of 12 inches below the lowest adjacent final grade. This value may be increased by 20 percent for each additional 1-foot of

width and/or depth to a maximum value of 3,000 psf. Recommended allowable bearing values include both dead and frequently applied live loads and may be increased by one third when designing for short duration wind or seismic forces.

Settlement

Based on the settlement characteristics of the earth materials that underlie the building sites and the anticipated loading, we estimate that the maximum total settlement of the footings will be less than approximately ¾ inch. Differential settlement is expected to be about ½ inch over a horizontal distance of approximately 20 feet, for an angular distortion ratio of 1:480. It is anticipated that the majority of the settlement will occur during construction or shortly after the initial application of loading.

The above settlement estimates are based on the assumption that the grading and construction are performed in accordance with the recommendations presented in this report and that the project geotechnical consultant will observe or test the earth material conditions in the footing excavations.

Lateral Resistance

Passive earth pressure of 250 psf per foot of depth to a maximum value of 2,500 psf may be used to establish lateral bearing resistance for footings. For areas coved with hardscape, passive earth pressure may be taken from the surface. For areas without hardscape, the upper 12 inches of the soil profile must be neglected when calculating passive earth pressure. A coefficient of friction of 0.30 times the dead load forces may be used between concrete and the supporting earth materials to determine lateral sliding resistance. The above values may be increased by one-third when designing for short duration wind or seismic forces. When combining passive and friction for lateral resistance, the passive component should be reduced by one third. In no case shall the lateral sliding resistance exceed one-half the dead load for clay, sandy clay, sandy silty clay, silty clay, and clayey silt.

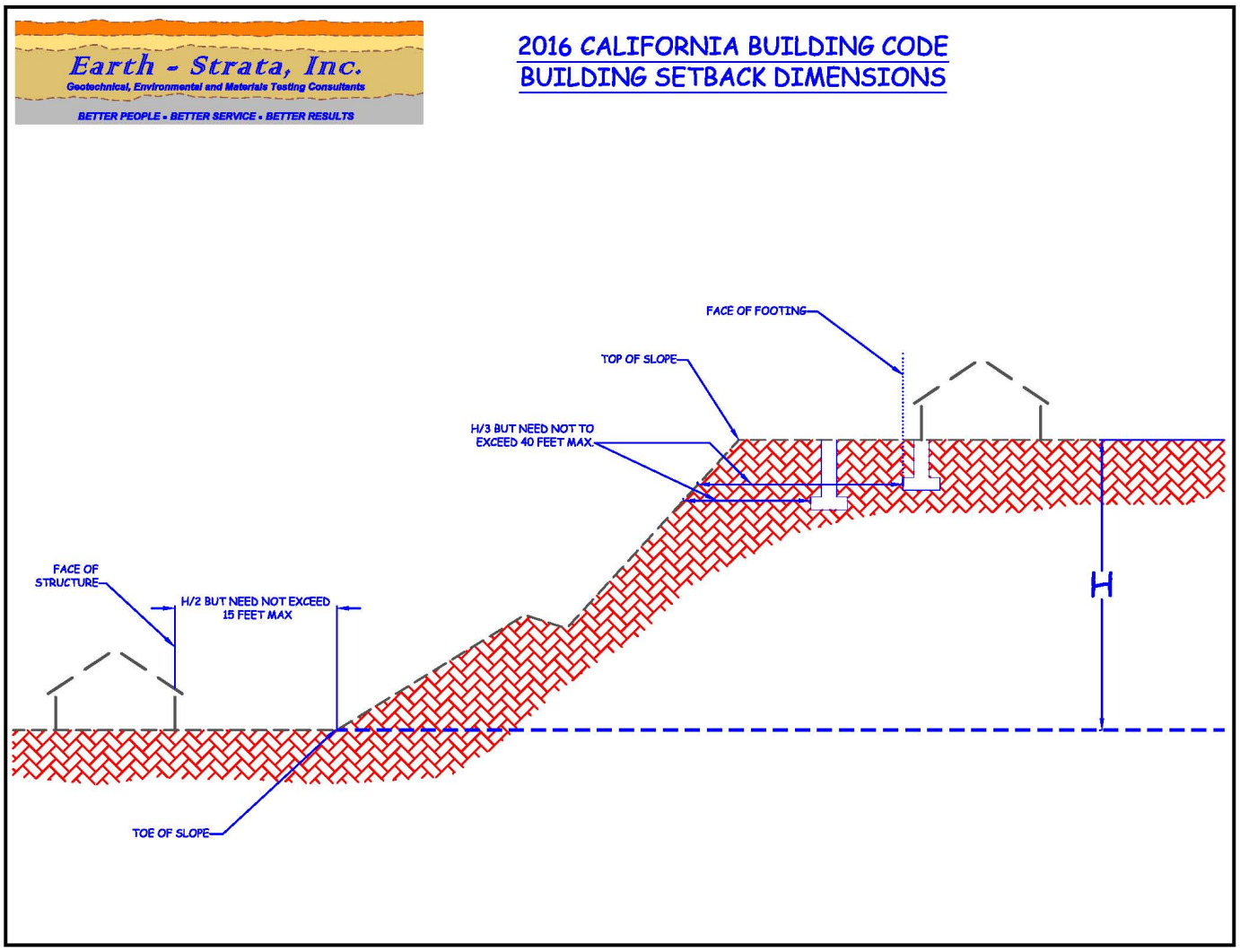
The above lateral resistance values are based on footings for an entire structure being placed directly against either compacted fill or competent bedrock.

Structural Setbacks and Building Clearance

Structural setbacks are required per the 2016 California Building Code (CBC). Additional structural setbacks are not required due to geologic or geotechnical conditions within the site. Improvements constructed in close proximity to natural or properly engineered and compacted slopes can, over time, be affected by natural processes including gravity forces, weathering, and long term secondary settlement. As a result, the CBC requires that buildings and structures be setback or footings deepened to resist the influence of these processes.

For structures that are planned near ascending and descending slopes, the footings should be embedded to satisfy the requirements presented in the CBC, Section 1808.7 as illustrated in the following Foundation Clearances from Slopes diagram.

FOUNDATION CLEARANCES FROM SLOPES



When determining the required clearance from ascending slopes with a retaining wall at the toe, the height of the slope shall be measured from the top of the wall to the top of the slope.

Foundation Observations

In accordance with the 2016 CBC and prior to the placement of forms, concrete, or steel, all foundation excavations should be observed by the geologist, engineer, or his representative to verify that they have been excavated into competent bearing materials. The excavations should be per the approved plans, moistened, cleaned of all loose materials, trimmed neat, level, and square. Any moisture softened earth materials should be removed prior to steel or concrete placement.

Earth materials from foundation excavations should not be placed in slab on grade areas unless the materials are tested for expansion potential and compacted to a minimum of 90 percent of the maximum dry density.

Expansive Soil Considerations

Preliminary laboratory test results indicate onsite earth materials exhibit an expansion potential of **VERY HIGH** as classified in accordance with 2016 CBC Section 1803.5.3 and ASTM D 4829. Additional, testing for expansive soil conditions should be conducted upon completion of rough grading. The following recommendations should be considered the very minimum requirements, for the earth materials tested. It is common practice for the project architect or structural engineer to require additional slab thickness, footing sizes, and/or reinforcement.

Very High Expansion Potential (Expansion Index of 131 or Greater)

Our laboratory test results indicate that the earth materials onsite exhibit a **VERY HIGH** expansion potential as classified in accordance with in 2016 CBC Section 1803.5.3 and ASTM D 4829. Accordingly, the CBC specifies that slab on ground foundations (floor slabs) resting on earth materials with expansion indices greater than 20, require special design considerations in accordance with 2016 CBC Sections 1808.6.1 and 1808.6.2. The design procedures are based on the thickness and plasticity index of the various earth materials within the upper 15 feet of the proposed structure.

Footings

- Exterior continuous footings for one-, two-, and three-story construction should be founded at a minimum depth of 24 inches below the lowest adjacent final grade. Interior continuous footings for one-, two-, and three-story construction may be founded at a minimum depth of 18 inches below the lowest adjacent final grade. All continuous footings should have a minimum width of 12, 15, and 18 inches, for one-, two-, and three-story structures, respectively, and should be reinforced with a minimum of four (4) No. 4 bars, two (2) top and two (2) bottom.

- Exterior pad footings intended to support roof overhangs, such as second story decks, patio covers and similar construction should be a minimum of 24 inches square and founded at a minimum depth of 24 inches below the lowest adjacent final grade. The pad footings should be reinforced with a minimum of No. 4 bars spaced a maximum of 16 inches on center, each way, and should be placed near the bottom-third of the footings.

Building Floor Slabs

- The project architect or structural engineer should evaluate minimum floor slab thickness and reinforcement in accordance with 2016 CBC Section 1808.6.2 based on an assumed effective plasticity index of 16. Building floor slabs should be a minimum of 5 inches thick and reinforced with a minimum of No. 4 bars spaced a maximum of 12 inches on center, each way. All floor slab reinforcement should be supported on concrete chairs or bricks to ensure the desired placement at mid-depth.

- Interior floor slabs, within living or moisture sensitive areas, should be underlain by a minimum 10-mil thick moisture/vapor barrier to help reduce the upward migration of moisture from the underlying earth materials. The moisture/vapor barrier used should meet the performance standards of an ASTM E 1745 Class A material, and be properly installed in accordance with ACI publication 318-05. It is the responsibility of the contractor to ensure that the moisture/vapor

barriers are free of openings, rips, or punctures prior to placing concrete. As an option for additional moisture reduction, higher strength concrete, such as a minimum 28-day compressive strength of 5,000 pounds per square inch (psi) may be used. Ultimately, the design of the moisture/vapor barrier system and recommendations for concrete placement and curing are the purview of the foundation engineer, taking into consideration the project requirements provided by the architect and owner.

- Garage floor slabs should have a minimum slab thickness of 5 inches on at least 4 inches of base and should be reinforced in a similar manner as living area floor slabs. Garage floor slabs should be placed separately from adjacent wall footings with a positive separation maintained with ⅜ inch minimum felt expansion joint materials and quartered with weakened plane joints. A 12-inch-wide by 24-inch-deep turn down founded at the same depth as adjacent footings should be provided across garage entrances. The turn down should be reinforced with a minimum of four (4) No. 4 bars, two (2) top and two (2) bottom.

- The subgrade earth materials below all floor slabs should be presoaked to achieve a moisture content that is at least 6 percent over optimum moisture content. This moisture content should penetrate to a minimum depth of 24 inches into the subgrade earth materials. Presaturation of the subgrade earth materials will promote uniform curing of the concrete, expand earth materials, and minimize the development of shrinkage cracks. The pre-watering should be verified and tested by Earth Strata Geotechnical Services during construction.

Post Tensioned Slab/Foundation Design Recommendations

In lieu of the proceeding foundation recommendations, post tensioned slabs may be used to support the proposed structures. We recommend that the foundation engineer design the foundation system using the Preliminary Post Tensioned Foundation Slab Design table below. These parameters have been provided in general accordance with Post Tensioned Design. Alternate designs addressing the effects of expansive earth materials are allowed per 2016 CBC Section 1808.6.2. When utilizing these parameters, the foundation engineer should design the foundation system in accordance with the allowable deflection criteria of applicable codes and per the requirements of the structural engineer/architect.

It should be noted that the post tensioned design methodology is partially based on the assumption that soil moisture changes around and underneath post tensioned slabs, are influenced only by climate conditions. Soil moisture change below slabs is the major factor in foundation damages relating to expansive soil. However, the design methodology has no consideration for presaturation, owner irrigation, or other non-climate related influences on the moisture content of subgrade earth materials. In recognition of these factors, we modified the geotechnical parameters determined from this methodology to account for reasonable irrigation practices and proper homeowner maintenance. Additionally, we recommend that prior to excavating footings, slab subgrades be presoaked to a depth of 12 inches and maintained at above optimum moisture until placing concrete. Furthermore, we recommend that the moisture content of the earth materials around the immediate perimeter and below the slab be presaturated to at least 1% above optimum moisture content just prior to placing concrete. The pre-watering should be verified and tested by Earth Strata Geotechnical Services during construction.

The following geotechnical parameters assume that areas adjacent to the foundations, which are planted and irrigated, will be designed with proper drainage to prevent water from ponding. Water ponding near the foundation causes significant moisture change below the foundation. Our recommendations do not account for excessive irrigation and/or incorrect landscape design. Planters placed adjacent to the foundation, should be designed with an effective drainage system or liners, to prevent moisture infiltration below the foundation. Some lifting of the perimeter foundation beam should be expected even with properly constructed planters. Based on our experience monitoring sites with similar earth materials, elevated moisture contents below the foundation perimeter due to incorrect landscaping irrigation or maintenance, can result in uplift at the perimeter foundation relative to the central portion of the slab.

Future owners should be informed and educated of the importance in maintaining a consistent level of moisture within the earth materials around the structures. Future owners should also be informed of the potential negative consequences of either excessive watering, or allowing expansive earth materials to become too dry. Earth materials will shrink as they dry, followed by swelling during the rainy winter season, or when irrigation is resumed. This will cause distress to site improvements and structures.

Preliminary Post Tensioned Foundation Slab Design

PARAMETER	VALUE
Expansion Index	Very High[1]
Percent Finer than 0.002 mm in the Fraction Passing the No. 200 Sieve	< 50 percent (assumed)
Type of Clay Mineral	Montmorillonite (assumed)
Thornthwaite Moisture Index	+20
Depth to Constant Soil Suction	7 feet
Constant Soil Suction	P.F. 3.6
Moisture Velocity	0.7 inches/month
Center Lift Edge moisture variation distance, e_m Center lift, y_m	5.5 feet 4.0 inches
Edge Lift Edge moisture variation distance, e_m Edge lift, y_m	4.5 feet 2.0 inches
Soluble Sulfate Content for Design of Concrete Mixtures in Contact with Earth Materials	Negligible
Modulus of Subgrade Reaction, k (assuming presaturation as indicated below)	120 pci
Minimum Perimeter Foundation Embedment	30
Perimeter Foundation Reinforcement	2 No. 5 Bars (or equivalent)[2]
Under Slab Moisture/Vapor Barrier and Sand Layer	10-mil thick moisture/vapor barrier meeting the requirements of a ASTM E 1745 Class A material

1. Obtained by laboratory testing.
2. Recommendations for foundation reinforcement are ultimately the purview of the foundation/structural engineer based upon the geotechnical criteria presented in this report, and structural engineering considerations.

Corrosivity

Corrosion is defined by the National Association of Corrosion Engineers (NACE) as "a deterioration of a substance or its properties because of a reaction with its environment." From a geotechnical viewpoint, the "substances" are the reinforced concrete foundations or buried metallic elements (not surrounded by concrete) and the "environment" is the prevailing earth materials in contact with them. Many factors can contribute to corrosivity, including the presence of chlorides, sulfates, salts, organic materials, different oxygen levels, poor drainage, different soil types, and moisture content. It is not considered practical or realistic to test for all of the factors which may contribute to corrosivity.

The potential for concrete exposure to chlorides is based upon the recognized Caltrans reference standard "Bridge Design Specifications", under Subsection 8.22.1 of that document, Caltrans has determined that "Corrosive water or soil contains more than 500 parts per million (ppm) of chlorides". Based on limited preliminary laboratory testing, the onsite earth materials have chloride contents *less* than 500 ppm. As such, specific requirements resulting from elevated chloride contents are not required.

Specific guidelines for concrete mix design are provided in 2016 CBC Section 1904.1 and ACI 318, Section 4.3 Table 4.3.1 when the soluble sulfate content of earth materials exceeds 0.1 percent by weight. Based on limited preliminary laboratory testing, the onsite earth materials are classified in accordance with Table 4.3.1 as having a *negligible* sulfate exposure condition. Therefore, structural concrete in contact with onsite earth materials should utilize Type I or II.

Based on our laboratory testing of resistivity, the onsite earth materials in contact with buried steel should be considered *corrosive*. Additionally, pH values below 9.7 are recognized as being corrosive to most common metallic components including, copper, steel, iron, and aluminum. The pH values for the earth materials tested were *lower* than 9.7. Therefore, any steel or metallic materials that are exposed to the earth materials should be encased in concrete or other measures should be taken to provide corrosion protection.

If building slabs are to be post tensioned, the post tensioning cables should be encased in concrete and/or encapsulated in accordance with the Post Tensioning Institute Guide Specifications. Post tensioning cable end plate anchors and nuts also need to be protected if exposed. If the anchor plates and nuts are in a recess in the edge of the concrete slab, the recess should be filled in with a non-shrink, non-porous, moisture-insensitive epoxy grout so that the anchorage assembly and the end of the cable are completely encased and isolated from the soil. A standard non-shrink, non-metallic cementitious grout may be used only when the post tension anchoring assembly is polyethylene encapsulated similar to that offered by Hayes Industries, LTD or O'Strand, Inc.

The preliminary test results for corrosivity are based on limited samples, and the initiation of grading may blend various earth materials together. This blending or imported material could alter and increase the detrimental properties of the onsite earth materials. Accordingly, additional testing for chlorides and sulfates along with testing for pH and resistivity should be performed upon completion of grading. Laboratory test results are presented in Appendix C.

RETAINING WALLS

Active and At-Rest Earth Pressures

Foundations may be designed in accordance with the recommendations provided in the Tentative Foundation Design Recommendation section of this report. The following table provides the minimum recommended equivalent fluid pressures for design of retaining walls a maximum of 8 feet high, using select non-expansive granular backfill materials with a sand equivalency of 30 or more (width of the select backfill should be at least ½ the retaining wall height). The active earth pressure should be used for design of unrestrained retaining walls, which are free to tilt slightly. The at-rest earth pressure should be used for design of retaining walls that are restrained at the top, such as basement walls, curved walls with no joints, or walls restrained at corners. For curved walls, active pressure may be used if tilting is acceptable and construction joints are provided at each angle point and at a minimum of 15 foot intervals along the curved segments.

MINIMUM STATIC EQUIVALENT FLUID PRESSURES (pcf)		
PRESSURE TYPE	BACKSLOPE CONDITION	
	LEVEL	2:1 (h:v)
Active Earth Pressure	50	87
At-Rest Earth Pressure	75	125

The retaining wall parameters provided do not account for hydrostatic pressure behind the retaining walls. Therefore, the subdrain system is a very important part of the design. All retaining walls should be designed to resist surcharge loads imposed by other nearby walls, structures, or vehicles should be added to the above earth pressures, if the additional loads are being applied within a 1.5:1 (h:v) plane projected up from the heel of the retaining wall footing. As a way of minimizing surcharge loads and the settlement potential of nearby buildings, the footings for the building can be deepened below the 1.5:1 (h:v)plane projected up from the heel of the retaining wall footing.

Upon request and under a separate scope of work, more detailed analyses can be performed to address equivalent fluid pressures with regard to stepped retaining walls, actual retaining wall heights, actual backfill inclinations, specific backfill materials, higher retaining walls requiring earthquake design motions, etc.

Subdrain System

We recommend a perforated pipe and gravel subdrain system be provided behind all proposed retaining walls to prevent the buildup of hydrostatic pressure behind the proposed retaining walls. The perforated pipe should consist of 4-inch minimum diameter Schedule 40 PVC or ABS SDR-35, placed with the perforations facing down. The pipe should be surrounded by 1 cubic foot per foot of ¾- or 1½ inch open graded gravel wrapped in filter fabric. The filter fabric should consist of Mirafi 140N or equivalent to prevent infiltration of fines and subsequent clogging of the subdrain system.

In lieu of a perforated pipe and gravel subdrain system, weep holes or open vertical masonry joints may be provided in the lowest row of block exposed to the air to prevent the buildup of hydrostatic pressure behind the proposed retaining walls. Weep holes should be a minimum of 3 inches in diameter and provided at intervals of at least every 6 feet along the wall. Open vertical masonry joints should be provided at a minimum of 32 inch intervals. A continuous gravel fill, a minimum of 1 cubic foot per foot, should be placed behind the weep holes or open masonry joints. The gravel should be wrapped in filter fabric consisting of Mirafi 140N or equivalent.

The retaining walls should be adequately coated on the backfilled side of the walls with a proven waterproofing compound by an experienced professional to inhibit infiltration of moisture through the walls.

Temporary Excavations

All excavations should be made in accordance with Cal-OSHA requirements. Earth Strata Geotechnical Services is not responsible for job site safety.

Retaining Wall Backfill

Retaining wall backfill materials should be approved by the geotechnical engineer or his representative prior to placement as compacted fill. Retaining wall backfill should be placed in lifts no greater than 6 to 8 inches, watered or air dried as necessary to achieve near optimum moisture contents. All retaining wall backfill should be compacted to a minimum of 90 percent of the maximum dry density as determined by ASTM D 1557. Retaining wall backfill should be capped with a paved surface drain.

CONCRETE FLATWORK

Thickness and Joint Spacing

Concrete sidewalks and patio type slabs should be at least 4 inches thick and provided with construction or expansion joints every 6 feet or less, to reduce the potential for excessive cracking. Concrete driveway slabs should be at least 5 inches thick and provided with construction or expansion joints every 10 feet or less, and for earth materials having a **VERY HIGH** expansion potential the edges of the driveway slabs should be thickened to 6 inches.

Subgrade Preparation

In order to reduce the potential for unsightly cracking, subgrade earth materials underlying concrete flatwork should be compacted at near optimum moisture to 90 percent of the maximum dry density determined by ASTM D 1557 and then moistened to optimum or slightly above optimum moisture content. This moisture should extend to a depth of 12 inches below subgrade and be maintained prior to placement of concrete. Pre-watering of the earth materials prior to placing concrete will promote uniform curing of the concrete and minimize the development of shrinkage cracks. The project geotechnical engineer or his representative should verify the density and moisture content of the earth materials and the depth of moisture penetration prior to placing concrete.

Cracking within concrete flatwork is often a result of factors such as the use of too high a water to cement ratio and/or inadequate steps taken to prevent moisture loss during the curing of the concrete. Concrete distress can be reduced by proper concrete mix design and proper placement and curing of the concrete. Minor cracking within concrete flatwork is normal and should be expected.

PRELIMINARY ASPHALTIC CONCRETE PAVEMENT DESIGN

Laboratory testing of representative earth materials indicate an R-value of 13 may be used for preliminary pavement design. The following table includes our minimum recommended asphaltic concrete pavement sections calculated in accordance with the State of California design procedures using assumed Traffic Indices. Final pavement design should be based on sampling and testing of post grading conditions. Alternative pavement sections and calculation sheets have been provided within the appendices of this report.

PRELIMINARY ASPHALTIC CONCRETE PAVEMENT DESIGN			
PARAMETERS	**AUTO PARKING**	**AUTO DRIVES**	**TRUCK DRIVES**
Assumed Traffic Index	5.0	6.0	7.0
Design R-Value	13	13	13
AC Thickness (inches)	3.0	3.0	4.0
AB Thickness (inches)	8	11.5	13.75

Notes: AC – Asphaltic Concrete
AB – Aggregate Base

The subgrade earth materials immediately below the aggregate base (base) should be compacted to a minimum of 95 percent of the maximum dry density determined by ASTM D 1557 to a minimum depth of 12 inches. Base materials should be compacted to a minimum of 95 percent of the maximum dry density determined by ASTM D 1557.

Base materials should consist of Class 2 aggregate base conforming to Section 26-1.02B of the State of California Standard Specifications or crushed aggregate base conforming to Section 200-2 of the Standard Specifications for Public Works Construction (Greenbook). Base materials should be compacted at or slightly below optimum moisture content. Asphaltic concrete materials and construction operations should conform to Section 203 of the Greenbook.

GRADING PLAN REVIEW AND CONSTRUCTION SERVICES

This report has been prepared for the exclusive use of **Mr. Steve Powell** and their authorized representative. It likely does not contain sufficient information for other parties or other uses. Earth Strata Geotechnical Services should be engaged to review the final design plans and specifications prior to construction. This is to verify that the recommendations contained in this report have been properly incorporated into the project plans and specifications. Should Earth Strata Geotechnical Services not be accorded the opportunity to review the project plans and specifications, we are not responsibility for misinterpretation of our recommendations.

We recommend that Earth Strata Geotechnical Services be retained to provide geologic and geotechnical engineering services during grading and foundation excavation phases of the work. In order to allow for design changes in the event that the subsurface conditions differ from those anticipated prior to construction.

Earth Strata Geotechnical Services should review any changes in the project and modify and approve in writing the conclusions and recommendations of this report. This report and the drawings contained within are intended for design input purposes only and are not intended to act as construction drawings or specifications. In the event that conditions encountered during grading or construction operations appear to be different than those indicated in this report, this office should be notified immediately, as revisions may be required.

REPORT LIMITATIONS

Our services were performed using the degree of care and skill ordinarily exercised, under similar circumstances, by reputable soils engineers and geologists, practicing at the time and location this report was prepared. No other warranty, expressed or implied, is made as to the conclusions and professional advice included in this report.

Earth materials vary in type, strength, and other geotechnical properties between points of observation and exploration. Groundwater and moisture conditions can also vary due to natural processes or the works of man on this or adjacent properties. As a result, we do not and cannot have complete knowledge of the subsurface conditions beneath the subject property. No practical study can completely eliminate uncertainty with regard to the anticipated geotechnical conditions in connection with a subject property. The conclusions and recommendations within this report are based upon the findings at the points of observation and are subject to confirmation by Earth Strata Geotechnical Services based on the conditions revealed during grading and construction.

This report was prepared with the understanding that it is the responsibility of the owner or their representative, to ensure that the conclusions and recommendations contained herein are brought to the attention of the other project consultants and are incorporated into the plans and specifications. The owners' contractor should properly implement the conclusions and recommendations during grading and construction, and notify the owner if they consider any of the recommendations presented herein to be unsafe or unsuitable.

APPENDIX A

REFERENCES

APPENDIX A

References

California Building Standards Commission, 2016, *2016 California Building Code, California Code of Regulations Title 24, Part 2, Volume 2 of 2,* Based on 2012 International Building Code.

DeLorme, 2004, (www.delorme.com) *Topo USA*®.

Hart, Earl W. and Bryant, William A., *1997, Fault Rupture Hazard Zones in California, CDMG Special Publication 42,* revised 2003.

Irvine Geotechnical, 2001, Mult Calc 2000, October 10.

Wagner, D.L., Jennings, C.W., Bedrossian, T.L., and Bortugno, E.J., 1981, *Geologic map of the Sacramento quadrangle, California, 1:250,000*: California Division of Mines and Geology, Regional Geologic Map 1A, scale 1:250,000

National Association of Corrosion Engineers, 1984, *Corrosion Basics An Introduction*, page 191.

APPENDIX B

EXPLORATORY LOGS

Geotechnical Boring Log B-1

Date: August 13, 2019	**Project Name: Cool, CA** **Page: 1 of 1**
Project Number: 192774-10A	**Logged By: JF**
Drilling Company: Drilling It	**Type of Rig: AMS 9630**
Drive Weight (lbs): 140	**Drop (in): 30** **Hole Diameter (in): 8**
Top of Hole Elevation (ft): See Map	**Hole Location: See Geotechnical Map**

Depth (ft)	Blow Count Per Foot	Sample Depth	Dry Density (pcf)	Moisture (%)	Classification Symbol	MATERIAL DESCRIPTION
0						**Artificial Fill, Undocumented (Afu):**
					GM	Silty GRAVEL; light gray, dry, medium dense, fine to medium gravel
	REF/4"	2.5'	122.7	2.7		**Mesozoic Metasedimentary Rocks (ms):**
						SERPENTINE; green to light greenish gray, dry, very hard, breaks down into
						silty GRAVEL
5						Total Depth: 5 feet
						No Groundwater
10						
15						
20						
25						
30						

42184 Remington Avenue, Temecula, CA 92590

Earth Strata Geotechnical Services, Inc.
Geotechnical, Environmental and Materials Testing Consultants
www.ESGSINC.com (951) 397-8315

Geotechnical Boring Log B-2

Date: August 13, 2019	**Project Name: Cool, CA** **Page: 1 of 1**
Project Number: 192774-10A	**Logged By: JF**
Drilling Company: Drilling It	**Type of Rig: AMS 9630**
Drive Weight (lbs): 140	**Drop (in): 30** **Hole Diameter (in): 8**
Top of Hole Elevation (ft): See Map	**Hole Location: See Geotechnical Map**

Depth (ft)	Blow Count Per Foot	Sample Depth	Dry Density (pcf)	Moisture (%)	Classification Symbol	MATERIAL DESCRIPTION
0						**Artificial Fill, Undocumented (Afu):**
						Sandy SILT; light yellowish brown, dry, medium dense, fine to medium sand
	REF/5"	2.5'				with trace gravel
						Mesozoic Metasedimentary Rocks (ms):
						METASEDIMENTARY; yellowish brown, dry, hard, breaks down into CLAY
5						Total Depth: 5 feet
						No Groundwater
10						
15						
20						
25						
30						

42184 Remington Avenue, Temecula, CA 92590

Earth Strata Geotechnical Services, Inc.
Geotechnical, Environmental and Materials Testing Consultants
www.ESGSINC.com (951) 397-8315

Geotechnical Boring Log B-3

Date: August 13, 2019	**Project Name: Cool, CA** **Page: 1 of 1**
Project Number: 192774-10A	**Logged By: JF**
Drilling Company: Drilling It	**Type of Rig: AMS 9630**
Drive Weight (lbs): 140	**Drop (in): 30** **Hole Diameter (in): 8**
Top of Hole Elevation (ft): See Map	**Hole Location: See Geotechnical Map**

Depth (ft)	Blow Count Per Foot	Sample Depth	Dry Density (pcf)	Moisture (%)	Classification Symbol	MATERIAL DESCRIPTION
0						**Artificial Fill, Undocumented (Afu):**
					ML	Sandy SILT; yellowish red, dry, dense, fine sand with trace gravel
5	34					
						Total Depth: 5 feet
						No Groundwater
10						
15						
20						
25						
30						

42184 Remington Avenue, Temecula, CA 92590

Earth Strata Geotechnical Services, Inc.
Geotechnical, Environmental and Materials Testing Consultants
www.ESGSINC.com (951) 397-8315

APPENDIX C

LABORATORY PROCEDURES AND TEST RESULTS

APPENDIX C

Laboratory Procedures and Test Results

Laboratory testing provided quantitative and qualitative data involving the relevant engineering properties of the representative earth materials selected for testing. The representative samples were tested in general accordance with American Society for Testing and Materials (ASTM) procedures and/or California Test Methods (CTM).

Soil Classification: Earth materials encountered during exploration were classified and logged in general accordance with the Standard Practice for Description and Identification of Soils (Visual-Manual Procedure) of ASTM D 2488. Upon completion of laboratory testing, exploratory logs and sample descriptions were reconciled to reflect laboratory test results with regard to ASTM D 2487.

Atterberg Limits: The Atterberg limits of select samples were determined using the guidelines of ASTM D 4318 for engineering classification of fine materials. The test results are presented in the table below.

SAMPLE LOCATION	MATERIAL DESCRIPTION	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	ASTM SYMBOL
Bulk 2 @ 0-5 feet	CLAY	29	21	8	CL

Moisture and Density Tests: For select samples moisture content was determined using the guidelines of ASTM D 2216 and dry density determinations were made using the guidelines of ASTM D 2937. These tests were performed on relatively undisturbed samples and the test results are presented on the exploratory logs.

Maximum Density Tests: The maximum dry density and optimum moisture content of representative samples were determined using the guidelines of ASTM D 1557. The test results are presented in the table below.

SAMPLE LOCATION	MATERIAL DESCRIPTION	MAXIMUM DRY DENSITY (pcf)	OPTIMUM MOISTURE CONTENT (%)
Bulk 2 @ 0-5 feet	CLAY	116.0	12.5

Expansion Index: The expansion potential of representative samples was evaluated using the guidelines of ASTM D 4829. The test results are presented in the table below.

SAMPLE LOCATION	MATERIAL DESCRIPTION	EXPANSION INDEX	EXPANSION POTENTIAL
Bulk 2 @ 0-5 feet	CLAY	137	Very High

R-Value: The R-value of representative samples was determined using the guidelines of CTM 301. The test results are presented in the table below.

SAMPLE LOCATION	MATERIAL DESCRIPTION	R-VALUE
Bulk 1 @ 0-5 feet	CLAY	13

Minimum Resistivity and pH Tests: Minimum resistivity and pH Tests of select samples were performed using the guidelines of CTM 643. The test results are presented in the table below.

SAMPLE LOCATION	MATERIAL DESCRIPTION	pH	MINIMUM RESISTIVITY (ohm-cm)
Bulk 2 @ 0-5 feet	CLAY	6.6	920

Soluble Sulfate: The soluble sulfate content of select samples was determined using the guidelines of CTM 417. The test results are presented in the table below.

SAMPLE LOCATION	MATERIAL DESCRIPTION	SULFATE CONTENT (% by weight)	SULFATE EXPOSURE
Bulk 2 @ 0-5 feet	CLAY	0.001	Negligible

Chloride Content: Chloride content of select samples was determined using the guidelines of CTM 422. The test results are presented in the table below.

SAMPLE LOCATION	MATERIAL DESCRIPTION	CHLORIDE CONTENT (ppm)
Bulk 2 @ 0-5 feet	CLAY	60

APPENDIX D

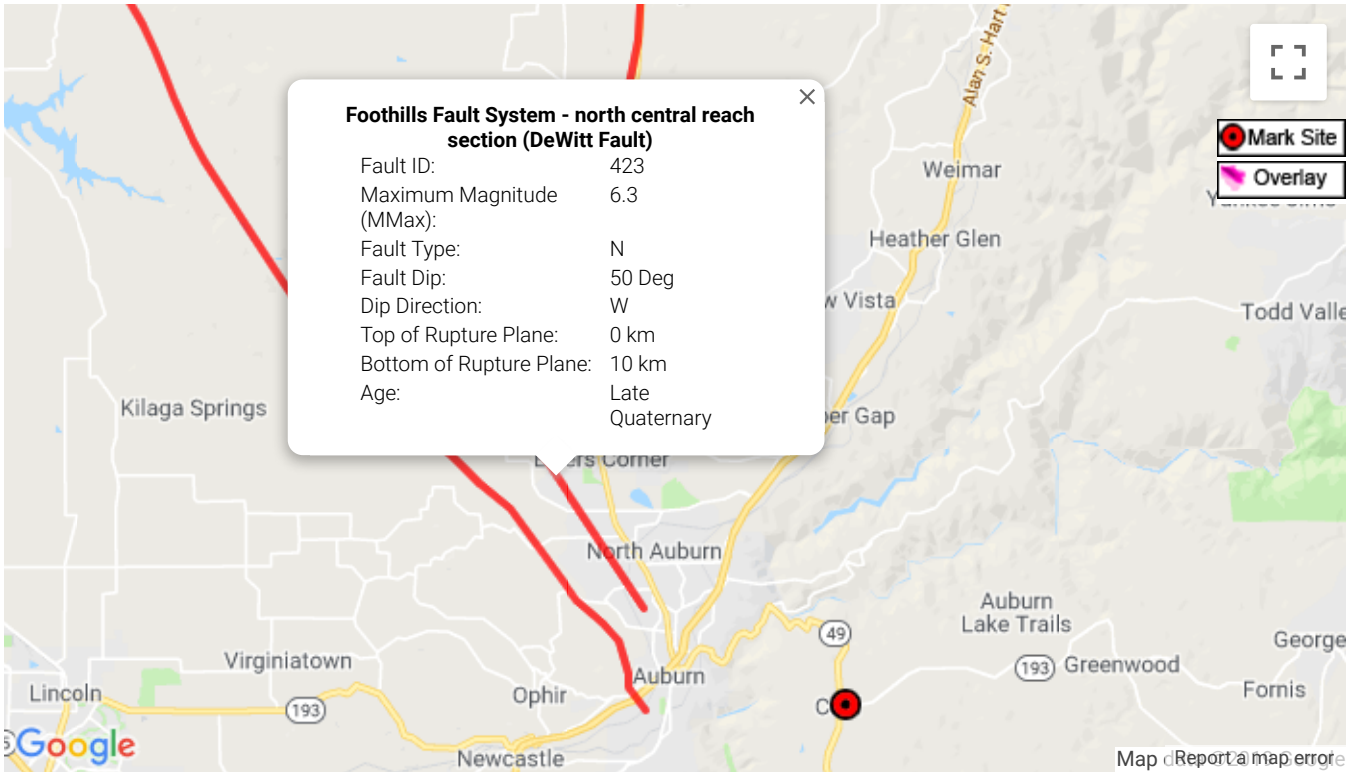
SEISMICITY

CALIFORNIA DEPARTMENT OF
TRANSPORTATION

Caltrans ARS Online (v2.3.09)

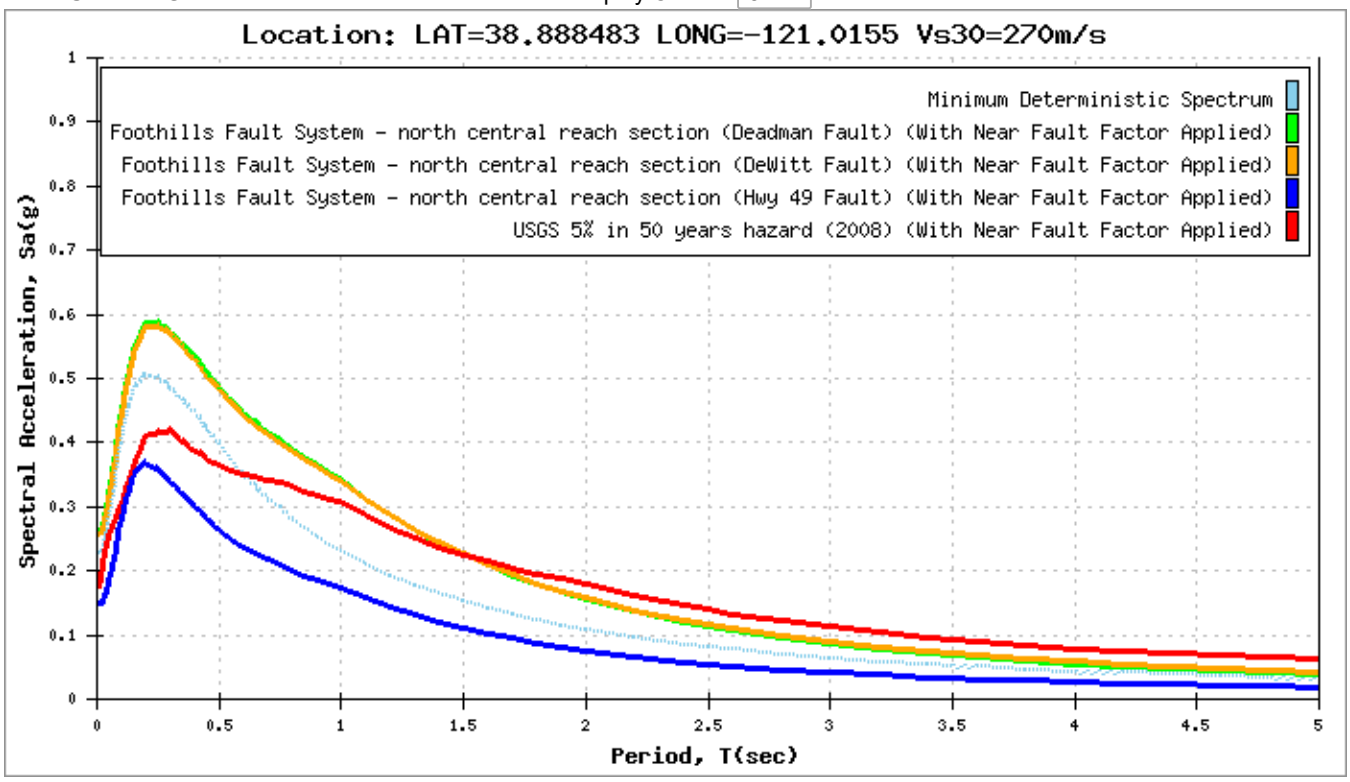
This web-based tool calculates both deterministic and probabilistic acceleration response spectra for any location in California based on criteria provided in *Appendix B of Caltrans Seismic Design Criteria*. More...

SELECT SITE LOCATION



Latitude: 38.888483 **Longitude:** -121.0155 ***V*S30:** 270 m/s Calculate

CALCULATED SPECTRA Display Curves: 3



Tabular Data | Envelope Only | Hide Near Fault | Axis Scale | Show Basin

Apply Near Fault Adjustment To:
NOTE: Caltrans SDC requires application of a Near Fault Adjustment factor for sites less than 25 km (Rrup) from the causative fault.

- [x] Deterministic Spectrum Using
  - 6.02 Km Foothills Fault System - north central reach section (Deadman Fault)
  - 6.78 Km Foothills Fault System - north central reach section (DeWitt Fault)
  - 14.47 Km Foothills Fault System - north central reach section (Hwy 49 Fault)
- [x] Probabilistic Spectrum Using
  - 6.02 Km (Recommend Performing Deaggregation To Verify)

(•) Show Spectrum with Adjustment Only
( ) Show Spectrum with and without near fault Adjustment

OK

This application is being updated for digital accessibility and will continue to function while updates are in progress.

U.S. Geological Survey - Earthquake Hazards Program

2008 National Seismic Hazard Maps - Source Parameters

New Search

Distance in Kilometers	Name	State	Pref Slip Rate (mm/yr)	Dip (degrees)	Dip Dir	Slip Sense	Rupture Top (km)	Rupture Bottom (km)	Length (km)
81.27	West Tahoe	CA	0.6	50	E	normal	0	13	51
87.59	North Tahoe	CA	0.4	50	E	normal	0	13	20
92.49	Great Valley 3, Mysterious Ridge	CA	1.3	20	W	thrust	9	14	51
94.36	Great Valley 4a, Trout Creek	CA	1.3	20	W	thrust	9	14	19
98.33	Great Valley 4b, Gordon Valley	CA	1.3	20	W	thrust	9	14	28

Search Results

2 of 2 earthquakes in map area.

Click for more information

6.2	**Northern California** 1892-04-21 17:43:00 (UTC)	–
6.0	**California-Nevada Border east of Truckee** 1857-09-03 03:05:00 (UTC)	–

Didn't find what you were looking for?

- Check your Settings.
- Which earthquakes are included on the map and list?
- Felt something not shown – report it here.

Hazards by Location

Search Information

Coordinates: 38.888483, -121.015500

Elevation: ft

Timestamp: 2019-08-14T20:58:37.668Z

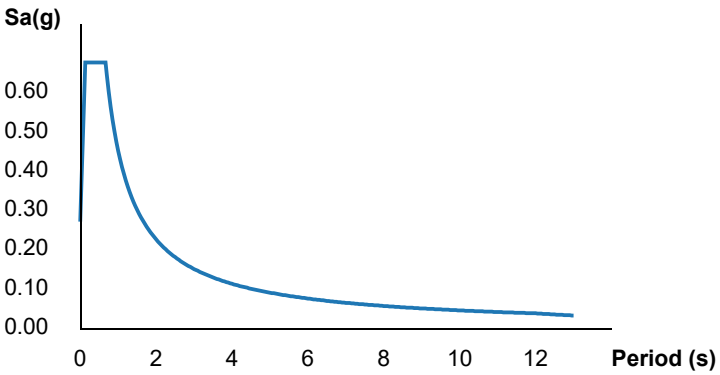
Hazard Type: Seismic

Reference Document: ASCE7-10

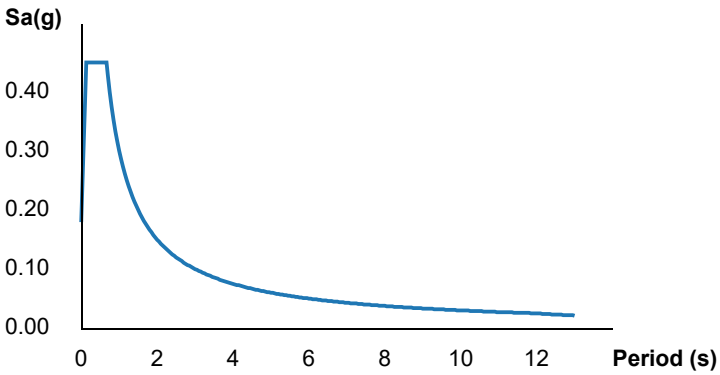
Risk Category: II

Site Class: D

MCER Horizontal Response Spectrum



Design Horizontal Response Spectrum



Basic Parameters

Name	Value	Description
S_S	0.477	MCE_R ground motion (period=0.2s)
S_1	0.234	MCE_R ground motion (period=1.0s)
S_{MS}	0.676	Site-modified spectral acceleration value
S_{M1}	0.451	Site-modified spectral acceleration value
S_{DS}	0.451	Numeric seismic design value at 0.2s SA
S_{D1}	0.301	Numeric seismic design value at 1.0s SA

Additional Information

Name	Value	Description
SDC	D	Seismic design category
F_a	1.419	Site amplification factor at 0.2s
F_v	1.933	Site amplification factor at 1.0s
CR_S	1.128	Coefficient of risk (0.2s)

CR_1	1.126	Coefficient of risk (1.0s)
PGA	0.16	MCE_G peak ground acceleration
F_{PGA}	1.48	Site amplification factor at PGA
PGA_M	0.237	Site modified peak ground acceleration
T_L	12	Long-period transition period (s)
SsRT	0.477	Probabilistic risk-targeted ground motion (0.2s)
SsUH	0.423	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
SsD	1.5	Factored deterministic acceleration value (0.2s)
S1RT	0.234	Probabilistic risk-targeted ground motion (1.0s)
S1UH	0.207	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
S1D	0.6	Factored deterministic acceleration value (1.0s)
PGAd	0.5	Factored deterministic acceleration value (PGA)

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Disclaimer

Hazard loads are provided by the U.S. Geological Survey Seismic Design Web Services.

While the information presented on this website is believed to be correct, ATC and its sponsors and contributors assume no responsibility or liability for its accuracy. The material presented in the report should not be used or relied upon for any specific application without competent examination and verification of its accuracy, suitability and applicability by engineers or other licensed professionals. ATC does not intend that the use of this information replace the sound judgment of such competent professionals, having experience and knowledge in the field of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the results of the report provided by this website. Users of the information from this website assume all liability arising from such use. Use of the output of this website does not imply approval by the governing building code bodies responsible for building code approval and interpretation for the building site described by latitude/longitude location in the report.

APPENDIX E

ASPHALTIC CONCRETE PAVEMENT CALCULATIONS

PAVING DESIGN

Earth - Strata, Inc.
Geotechnical, Environmental and Materials Testing Consultants
BETTER PEOPLE • BETTER SERVICE • BETTER RESULTS

JN: **192774-10A** CONSULT: **SMP**
PROJECT: **Commercial Building; Cool CA**

CALCULATION SHEET # **Auto Parking**

CALTRANS METHOD FOR DESIGN OF FLEXIBLE PAVEMENT

Input "R" value or "CBR" of native soil	13	
Type of Index Property - "R" value or "CBR" (C or R)	R	R Value
R Value used for Caltrans Method	13	
Input Traffic Index (TI)	5	
Calculated Total Gravel Equivalent (GE)	1.392	feet
Calculated Total Gravel Equivalent (GE)	16.704	inches
Calculated Gravel Factor (Gf) for A/C paving	2.53	
Gravel Factor for Base Course (Gf)	1.1	

Pavement sections provided below are considered equal; but, do not reflect reviewing agency minimums.

Gravel Equivalent			INCHES		FEET	
GE (feet)	GE (inches)	Delta (inches)	A/C Section Thickness (inches)	Minimum Base (inches)	A/C Section Thickness (feet)	Minimum Base (feet)
0.63	7.60	9.10	3.0	8.4	0.25	0.70
0.74	8.87	7.83	3.5	7.2	0.29	0.60
0.84	10.14	6.56	4.0	6.0	0.33	0.50
0.89	10.65	6.06	4.2	5.4	0.35	0.45
0.95	11.41	5.30	4.5	4.8	0.38	0.40
1.01	12.17	4.54	4.8	4.2	0.40	0.35
1.06	12.67	4.03	5.0	3.6	0.42	0.30
1.16	13.94	2.76	5.5	2.4	0.46	0.20
1.27	15.21	1.50	6.0	1.2	0.50	0.10
1.37	16.48	0.23	6.5	0.0	0.54	0.00
1.48	17.74	-1.04	7.0		0.58	

PAVING DESIGN

Earth - Strata, Inc.
Geotechnical, Environmental and Materials Testing Consultants
BETTER PEOPLE • BETTER SERVICE • BETTER RESULTS

JN: **192774-10A** CONSULT: **SMP**
PROJECT: **Commercial Building; Cool CA**

CALCULATION SHEET # **Auto Drives**

CALTRANS METHOD FOR DESIGN OF FLEXIBLE PAVEMENT

Input "R" value or "CBR" of native soil	13	
Type of Index Property - "R" value or "CBR" (C or R)	R	R Value
R Value used for Caltrans Method	13	
Input Traffic Index (TI)	6	
Calculated Total Gravel Equivalent (GE)	1.6704	feet
Calculated Total Gravel Equivalent (GE)	20.0448	inches
Calculated Gravel Factor (Gf) for A/C paving	2.31	
Gravel Factor for Base Course (Gf)	1.1	

Pavement sections provided below are considered equal; but, do not reflect reviewing agency minimums.

Gravel Equivalent GE (feet)	GE (inches)	Delta (inches)	INCHES A/C Section Thickness (inches)	INCHES Minimum Base (inches)	FEET A/C Section Thickness (feet)	FEET Minimum Base (feet)
0.96	11.57	8.48	5.0	7.8	0.42	0.65
1.01	12.15	7.90	5.3	7.2	0.44	0.60
1.06	12.73	7.32	5.5	6.6	0.46	0.55
1.10	13.19	6.86	5.7	6.0	0.48	0.50
1.16	13.88	6.16	6.0	5.4	0.50	0.45
1.21	14.46	5.58	6.3	4.8	0.52	0.40
1.25	15.04	5.00	6.5	4.8	0.54	0.40
1.35	16.20	3.85	7.0	3.6	0.58	0.30
1.54	18.51	1.53	8.0	1.2	0.67	0.10
1.64	19.67	0.38	8.5	0.6	0.71	0.05
1.74	20.83	-0.78	9.0	0.0	0.75	0.00

PAVING DESIGN

Earth - Strata, Inc.
Geotechnical, Environmental and Materials Testing Consultants
BETTER PEOPLE • BETTER SERVICE • BETTER RESULTS

JN: **192774-10A** CONSULT: **SMP**
PROJECT: **Commercial Building; Cool CA**

CALCULATION SHEET # **Truck Drives**

CALTRANS METHOD FOR DESIGN OF FLEXIBLE PAVEMENT

Input "R" value or "CBR" of native soil	13	
Type of Index Property - "R" value or "CBR" (C or R)	R	R Value
R Value used for Caltrans Method	13	
Input Traffic Index (TI)	7	
Calculated Total Gravel Equivalent (GE)	1.9488	feet
Calculated Total Gravel Equivalent (GE)	23.3856	inches
Calculated Gravel Factor (Gf) for A/C paving	2.14	
Gravel Factor for Base Course (Gf)	1.1	

Pavement sections provided below are considered equal; but, do not reflect reviewing agency minimums.

Gravel Equivalent			INCHES		FEET	
GE (feet)	GE (inches)	Delta (inches)	A/C Section Thickness (inches)	Minimum Base (inches)	A/C Section Thickness (feet)	Minimum Base (feet)
0.71	8.57	14.82	4.0	13.8	0.33	1.15
0.98	11.78	11.60	5.5	10.8	0.46	0.90
1.07	12.85	10.53	6.0	9.6	0.50	0.80
1.16	13.92	9.46	6.5	8.4	0.54	0.70
1.25	15.00	8.39	7.0	7.8	0.58	0.65
1.34	16.07	7.32	7.5	6.6	0.63	0.55
1.43	17.14	6.25	8.0	5.4	0.67	0.45
1.52	18.21	5.18	8.5	4.8	0.71	0.40
1.61	19.28	4.11	9.0	3.6	0.75	0.30
1.79	21.42	1.96	10.0	1.8	0.83	0.15
1.96	23.56	-0.18	11.0	0.0	0.92	0.00

APPENDIX F

GENERAL EARTHWORK AND GRADING SPECIFICATIONS

EARTH-STRATA

General Earthwork and Grading Specifications

General

Intent: These General Earthwork and Grading Specifications are intended to be the minimum requirements for the grading and earthwork shown on the approved grading plan(s) and/or indicated in the geotechnical report(s). These General Earthwork and Grading Specifications should be considered a part of the recommendations contained in the geotechnical report(s) and if they are in conflict with the geotechnical report(s), the specific recommendations in the geotechnical report shall supersede these more general specifications. Observations made during earthwork operations by the project Geotechnical Consultant may result in new or revised recommendations that may supersede these specifications and/or the recommendations in the geotechnical report(s).

The Geotechnical Consultant of Record: The Owner shall employ a qualified Geotechnical Consultant of Record (Geotechnical Consultant), prior to commencement of grading or construction. The Geotechnical Consultant shall be responsible for reviewing the approved geotechnical report(s) and accepting the adequacy of the preliminary geotechnical findings, conclusions, and recommendations prior to the commencement of the grading or construction.

Prior to commencement of grading or construction, the Owner shall coordinate with the Geotechnical Consultant, and Earthwork Contractor (Contractor) to schedule sufficient personnel for the appropriate level of observation, mapping, and compaction testing.

During earthwork and grading operations, the Geotechnical Consultant shall observe, map, and document the subsurface conditions to confirm assumptions made during the geotechnical design phase of the project. Should the observed conditions differ significantly from the interpretive assumptions made during the design phase, the Geotechnical Consultant shall recommend appropriate changes to accommodate the observed conditions, and notify the reviewing agency where required.

The Geotechnical Consultant shall observe the moisture conditioning and processing of the excavations and fill materials. The Geotechnical Consultant should perform periodic relative density testing of fill materials to verify that the attained level of compaction is being accomplished as specified.

The Earthwork Contractor: The Earthwork Contractor (Contractor) shall be qualified, experienced, and knowledgeable in earthwork logistics, preparation and processing of earth materials to receive compacted fill, moisture-conditioning and processing of fill, and compacting fill. The Contractor shall be provided with the approved grading plans and geotechnical report(s) for his review and acceptance of responsibilities, prior to commencement of grading. The Contractor shall be solely responsible for performing the grading in accordance with the approved grading plans and geotechnical report(s). Prior to commencement of grading, the Contractor shall prepare and submit to the Owner and the Geotechnical Consultant a work plan that indicates the sequence of earthwork grading, the number of "equipment" of work and the estimated quantities of daily earthwork contemplated for the site. The Contractor shall inform the Owner and the Geotechnical Consultant of work schedule changes and revisions to the work plan at least 24 hours in advance of such changes so that appropriate personnel will be available for observation and testing. No assumptions shall be made by the Contractor with regard to whether the Geotechnical Consultant is aware of all grading operations.

It is the sole responsibility of the Contractor to provide adequate equipment and methods to accomplish the earthwork operations in accordance with the applicable grading codes and agency ordinances, these specifications, and the recommendations in the approved geotechnical report(s) and grading plan(s). At the sole discretion of the Geotechnical Consultant, any unsatisfactory conditions, such as unsuitable earth materials, improper moisture conditioning, inadequate compaction, insufficient buttress keyway size, adverse weather conditions, etc., resulting in a quality of work less than required in the approved grading plans and geotechnical report(s), the Geotechnical Consultant shall reject the work and may recommend to the Owner that grading be stopped until conditions are corrected.

Preparation of Areas for Compacted Fill

Clearing and Grubbing: Vegetation, such as brush, grass, roots, and other deleterious material shall be sufficiently removed and properly disposed in a method acceptable to the Owner, Geotechnical Consultant, and governing agencies.

The Geotechnical Consultant shall evaluate the extent of these removals on a site by site basis. Earth materials to be placed as compacted fill shall not contain more than 1 percent organic materials (by volume). No compacted fill lift shall contain more than 10 percent organic matter.

Should potentially hazardous materials be encountered, the Contractor shall stop work in the affected area, and a hazardous materials specialist shall immediately be consulted to evaluate the potentially hazardous materials, prior to continuing to work in that area.

It is our understanding that the State of California defines most refined petroleum products (gasoline, diesel fuel, motor oil, grease, coolant, etc.) as hazardous waste. As such, indiscriminate dumping or spillage of these fluids may constitute a misdemeanor, punishable by fines and/or imprisonment, and shall be prohibited. The contractor is responsible for all hazardous waste related to his operations. The Geotechnical Consultant does not have expertise in this area. If hazardous waste is a concern, then the Owner should contract the services of a qualified environmental assessor.

Processing: Exposed earth materials that have been observed to be satisfactory for support of compacted fill by the Geotechnical Consultant shall be scarified to a minimum depth of 6 inches. Exposed earth materials that are not observed to be satisfactory shall be removed or alternative recommendations may be provided by the Geotechnical Consultant. Scarification shall continue until the exposed earth materials are broken down and free of oversize material and the working surface is reasonably uniform, flat, and free of uneven features that would inhibit uniform compaction. The earth materials should be moistened or air dried to near optimum moisture content, prior to compaction.

Overexcavation: The Cut Lot Typical Detail and Cut/Fill Transition Lot Typical Detail, included herein provides a graphic illustration that depicts typical overexcavation recommendations made in the approved geotechnical report(s) and/or grading plan(s).

Keyways and Benching: Where fills are to be placed on slopes steeper than 5:1 (horizontal to vertical units), the ground shall be thoroughly benched as compacted fill is placed. Please see the three Keyway and Benching Typical Details with subtitles Cut Over Fill Slope, Fill Over Cut Slope, and Fill Slope for a graphic illustration. The lowest bench or smallest keyway shall be a minimum of 15 feet wide (or ½ the proposed slope height) and at least 2 feet into competent earth materials as advised by the Geotechnical Consultant. Typical benches shall be excavated a minimum height of 4 feet into competent earth materials or as recommended by the Geotechnical Consultant. Fill placed on slopes steeper than 5:1 should be thoroughly benched or otherwise excavated to provide a flat subgrade for the compacted fill.

Evaluation/Acceptance of Bottom Excavations: All areas to receive compacted fill (bottom excavations), including removal excavations, processed areas, keyways, and benching, shall be observed, mapped, general elevations recorded, and/or tested prior to being accepted by the Geotechnical Consultant as suitable to receive compacted fill. The Contractor shall obtain a written acceptance from the Geotechnical Consultant prior to placing compacted fill. A licensed surveyor shall provide the survey control for determining elevations of bottom excavations, processed areas, keyways, and

benching. The Geotechnical Consultant is not responsible for erroneously located, fills, subdrain systems, or excavations.

Fill Materials

General: Earth material to be used as compacted fill should to a large extent be free of organic matter and other deleterious substances as evaluated and accepted by the Geotechnical Consultant.

Oversize: Oversize material is rock that does not break down into smaller pieces and has a maximum diameter greater than 8 inches. Oversize rock shall not be included within compacted fill unless specific methods and guidelines acceptable to the Geotechnical Consultant are followed. For examples of methods and guidelines of oversize rock placement see the enclosed Oversize Rock Disposal Detail. The inclusion of oversize materials in the compacted fill shall only be acceptable if the oversize material is completely surrounded by compacted fill or thoroughly jetted granular materials. No oversize material shall be placed within 10 vertical feet of finish grade or within 2 feet of proposed utilities or underground improvements.

Import: Should imported earth materials be required, the proposed import materials shall meet the requirements of the Geotechnical Consultant. Well graded, very low expansion potential earth materials free of organic matter and other deleterious substances are usually sought after as import materials. However, it is generally in the Owners best interest that potential import earth materials are provided to the Geotechnical Consultant to determine their suitability for the intended purpose. At least 48 hours should be allotted for the appropriate laboratory testing to be performed, prior to starting the import operations.

Fill Placement and Compaction Procedures

Fill Layers: Fill materials shall be placed in areas prepared to receive fill in nearly horizontal layers not exceeding 8 inches in loose thickness. Thicker layers may be accepted by the Geotechnical Consultant, provided field density testing indicates that the grading procedures can adequately compact the thicker layers. Each layer of fill shall be spread evenly and thoroughly mixed to obtain uniformity within the earth materials and consistent moisture throughout the fill.

Moisture Conditioning of Fill: Earth materials to be placed as compacted fill shall be watered, dried, blended, and/or mixed, as needed to obtain relatively uniform moisture contents that are at or slightly above optimum. The maximum density and optimum moisture content tests should be performed in accordance with the American Society of Testing and Materials (ASTM test method D1557-00).

Compaction of Fill: After each layer has been moisture-conditioned, mixed, and evenly spread, it should be uniformly compacted to a minimum of 90 percent of maximum dry density as determined by ASTM test method D1557-00. Compaction equipment shall be adequately sized and be either specifically designed for compaction of earth materials or be proven to consistently achieve the required level of compaction.

Compaction of Fill Slopes: In addition to normal compaction procedures specified above, additional effort to obtain compaction on slopes is needed. This may be accomplished by backrolling of slopes with sheepsfoot rollers as the fill is being placed, by overbuilding the fill slopes, or by other methods producing results that are satisfactory to the Geotechnical Consultant. Upon completion of grading, relative compaction of the fill and the slope face shall be a minimum of 90 percent of maximum density per ASTM test method D1557-00.

Compaction Testing of Fill: Field tests for moisture content and relative density of the compacted fill earth materials shall be periodically performed by the Geotechnical Consultant. The location and frequency of tests shall be at the Geotechnical Consultant's discretion based on field observations. Compaction test locations will not necessarily be random. The test locations may or may not be selected to verify minimum compaction requirements in areas that are typically prone to inadequate compaction, such as close to slope faces and near benching.

Frequency of Compaction Testing: Compaction tests shall be taken at minimum intervals of every 2 vertical feet and/or per 1,000 cubic yards of compacted materials placed. Additionally, as a guideline, at least one (1) test shall be taken on slope faces for each 5,000 square feet of slope face and/or for each 10 vertical feet of slope. The Contractor shall assure that fill placement is such that the testing schedule described herein can be accomplished by the Geotechnical Consultant. The Contractor shall stop or slow down the earthwork operations to a safe level so that these minimum standards can be obtained.

Compaction Test Locations: The approximate elevation and horizontal coordinates of each test location shall be documented by the Geotechnical Consultant. The Contractor shall coordinate with the Surveyor to assure that sufficient grade stakes are established. This will provide the Geotechnical Consultant with sufficient accuracy to determine the approximate test locations and elevations. The Geotechnical Consultant can not be responsible for staking erroneously located by the Surveyor or Contractor. A minimum of two grade stakes should be provided at a maximum horizontal distance of 100 feet and vertical difference of less than 5 feet.

Subdrain System Installation

Subdrain systems shall be installed in accordance with the approved geotechnical report(s), the approved grading plan, and the typical details provided herein. The Geotechnical Consultant may recommend additional subdrain systems and/or changes to the subdrain systems described herein, with regard to the extent, location, grade, or material depending on conditions encountered during grading or other factors. All subdrain systems shall be surveyed by a licensed land surveyor (except for retaining wall subdrain systems) to verify line and grade after installation and prior to burial. Adequate time should be allowed by the Contractor to complete these surveys.

Excavation

All excavations and over-excavations for remedial purposes shall be evaluated by the Geotechnical Consultant during grading operations. Remedial removal depths indicated on the geotechnical plans are estimates only. The actual removal depths and extent shall be determined by the Geotechnical Consultant based on the field evaluation of exposed conditions during grading operations. Where fill over cut slopes are planned, the cut portion of the slope shall be excavated, evaluated, and accepted by the Geotechnical Consultant prior to placement of the fill portion of the proposed slope, unless specifically addressed by the Geotechnical Consultant. Typical details for cut over fill slopes and fill over cut slopes are provided herein.

Trench Backfill

1) The Contractor shall follow all OHSA and Cal/OSHA requirements for trench excavation safety.

2) Bedding and backfill of utility trenches shall be done in accordance with the applicable provisions in the Standard Specifications of Public Works Construction. Bedding materials shall have a Sand Equivalency more than 30 (SE>30). The bedding shall be placed to 1 foot over the conduit and thoroughly jetting to provide densification. Backfill should be compacted to a minimum of 90 percent of maximum dry density, from 1 foot above the top of the conduit to the surface.

3) Jetting of the bedding materials around the conduits shall be observed by the Geotechnical Consultant.

4) The Geotechnical Consultant shall test trench backfill for the minimum compaction requirements recommended herein. At least one test should be conducted for every 300 linear feet of trench and for each 2 vertical feet of backfill.

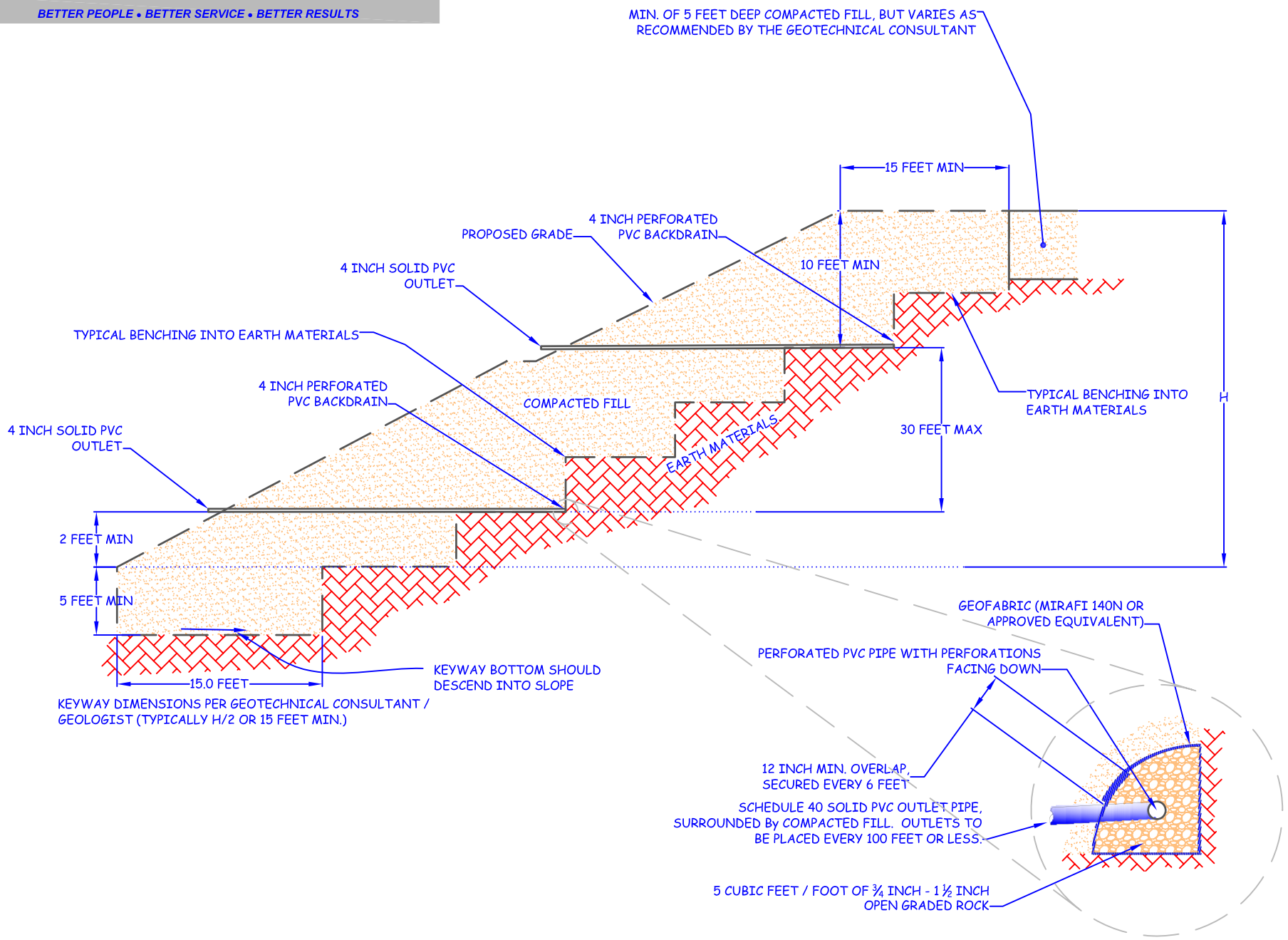
5) For trench backfill the lift thicknesses shall not exceed those allowed in the Standard Specifications of Public Works Construction, unless the Contractor can demonstrate to the Geotechnical Consultant that the fill lift can be compacted to the minimum relative compaction by his alternative equipment or method.

Earth - Strata, Inc.

Geotechnical, Environmental and Materials Testing Consultants

BETTER PEOPLE • BETTER SERVICE • BETTER RESULTS

STABILIZATION FILL TYPICAL DETAIL

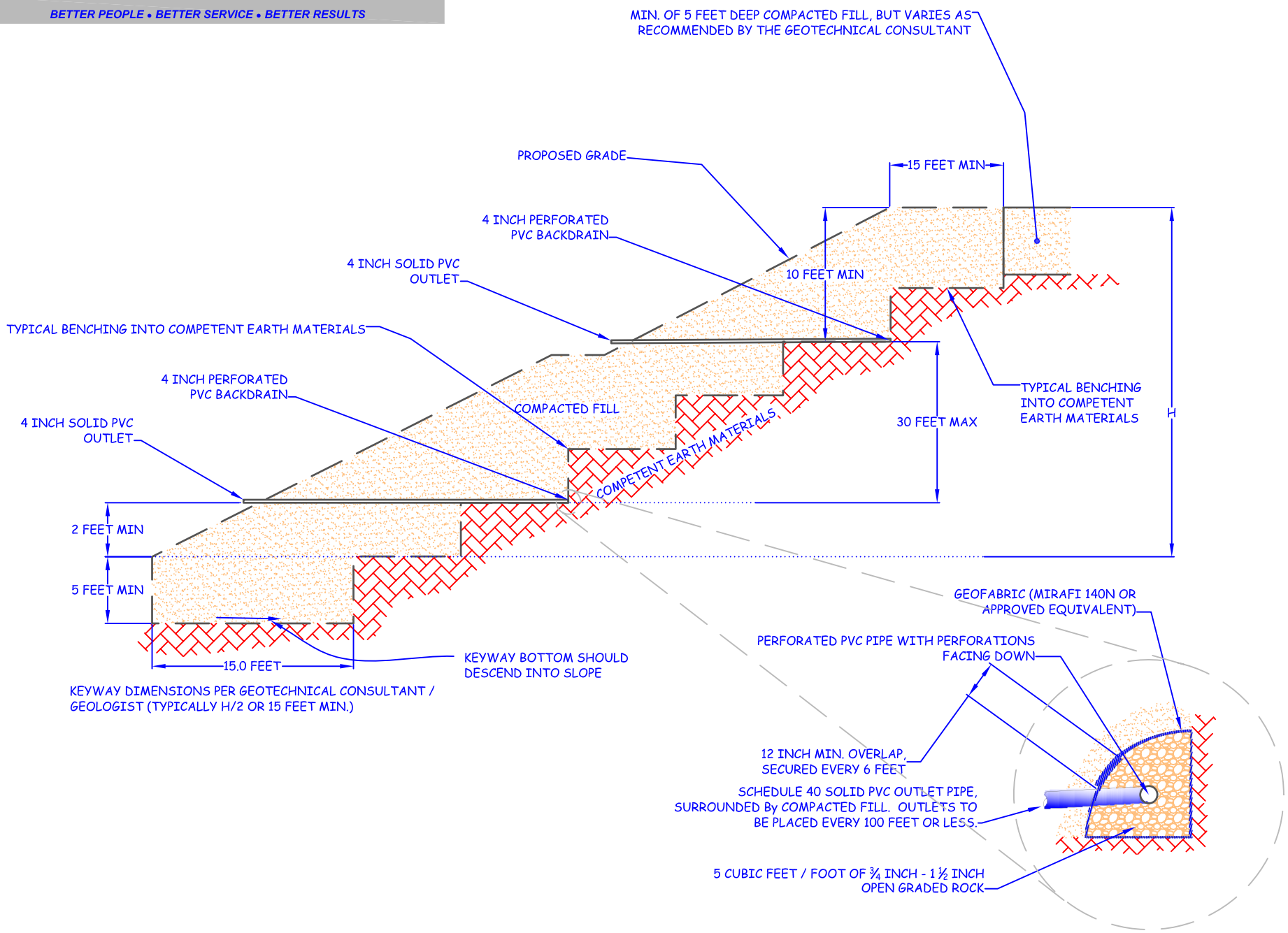


Earth - Strata, Inc.

Geotechnical, Environmental and Materials Testing Consultants

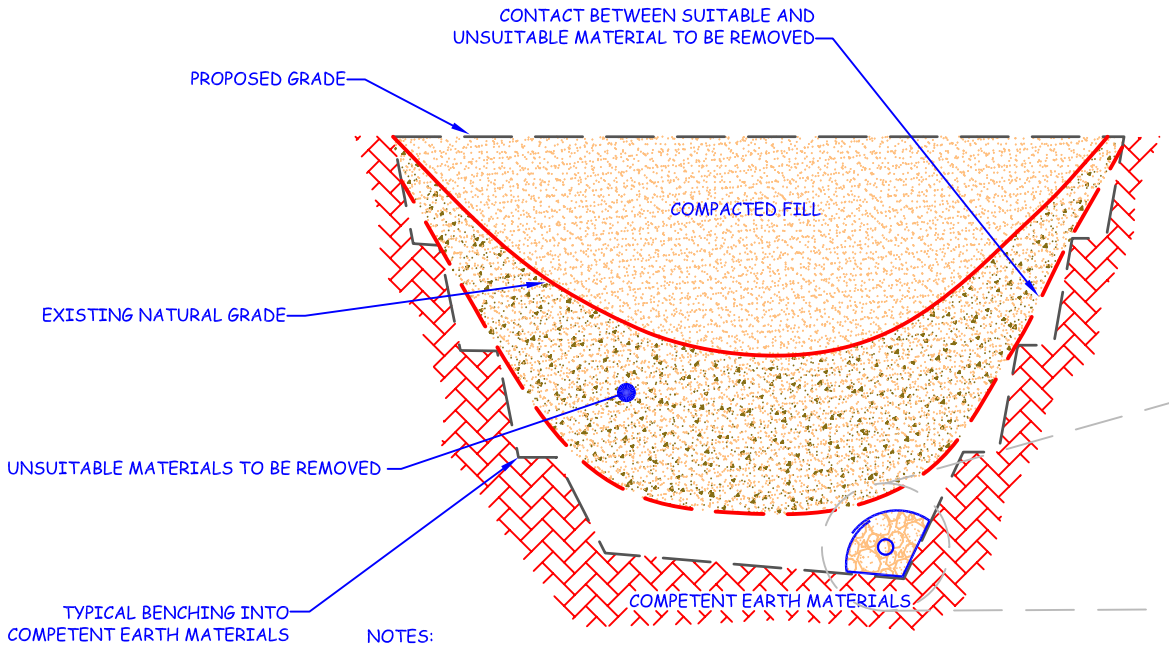
BETTER PEOPLE • BETTER SERVICE • BETTER RESULTS

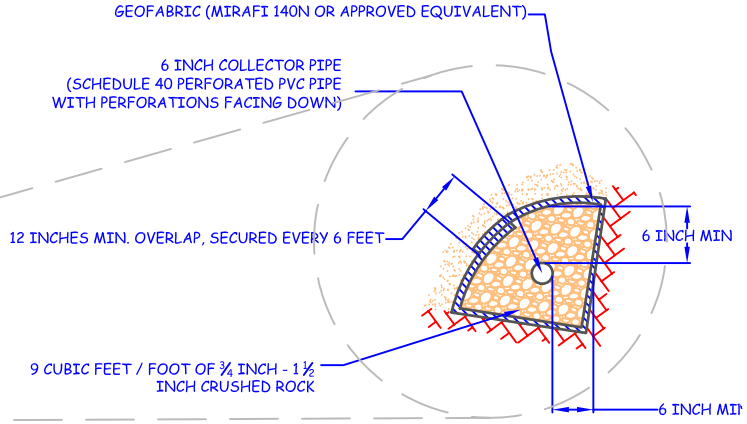
BUTTRESS TYPICAL DETAIL



Earth + Strata, Inc.
Geotechnical, Environmental and Materials Testing Consultants
BETTER PEOPLE • BETTER SERVICE • BETTER RESULTS

CANYON SUBDRAIN SYSTEM TYPICAL DETAIL

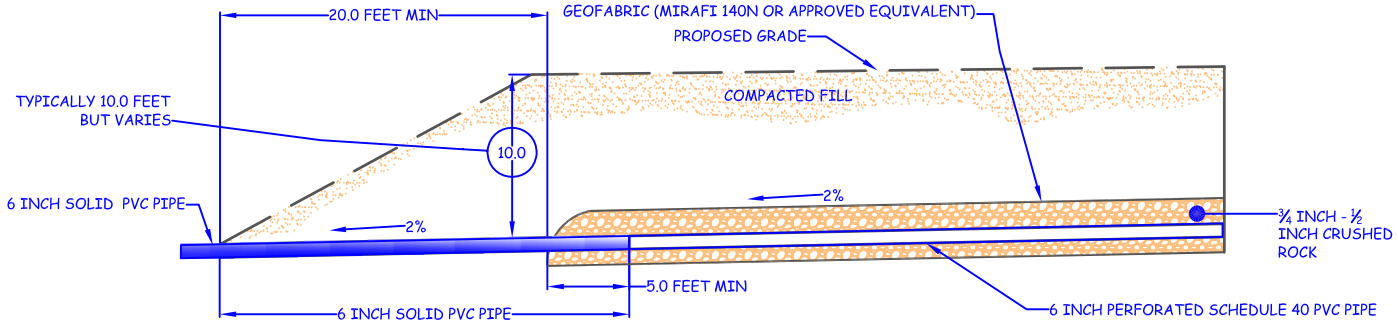




NOTES:
1 - CONTINUOUS RUNS IN EXCESS OF 500 FEET LONG WILL REQUIRE AN 8 INCH DIAMETER PIPE.

2 - FINAL 20 FEET OF PIPE AT OUTLET WILL BE SOLID AND BACKFILLED WITH COMPACTED FINE-GRAINED EARTH MATERIALS.

CANYON SUBDRAIN TYPICAL OUTLET

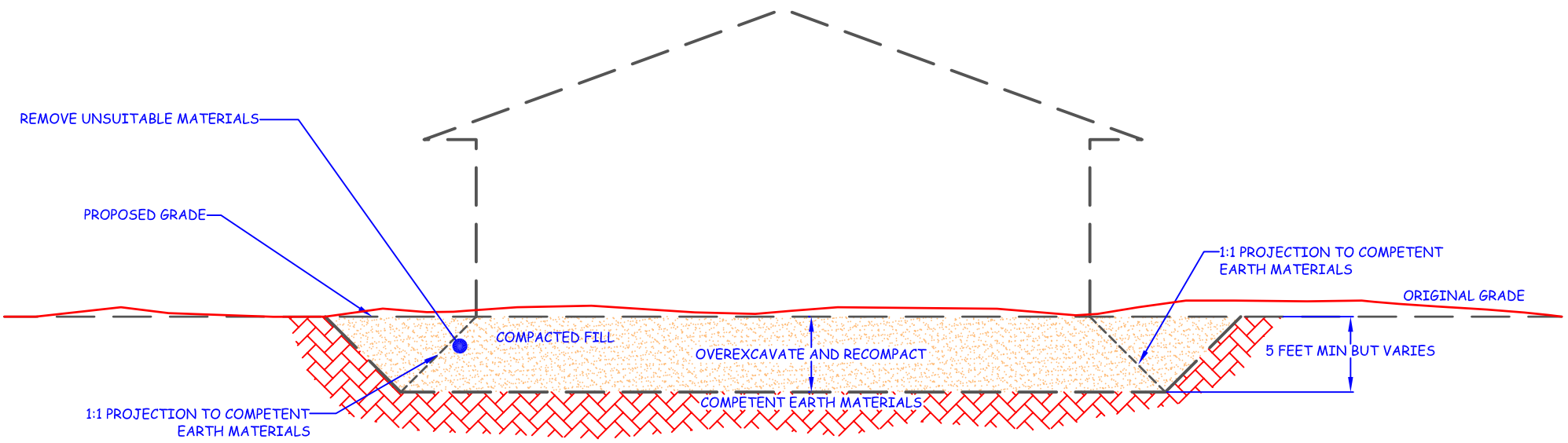


Earth = Strata, Inc.

Geotechnical, Environmental and Materials Testing Consultants

BETTER PEOPLE • BETTER SERVICE • BETTER RESULTS

CUT LOT TYPICAL DETAIL

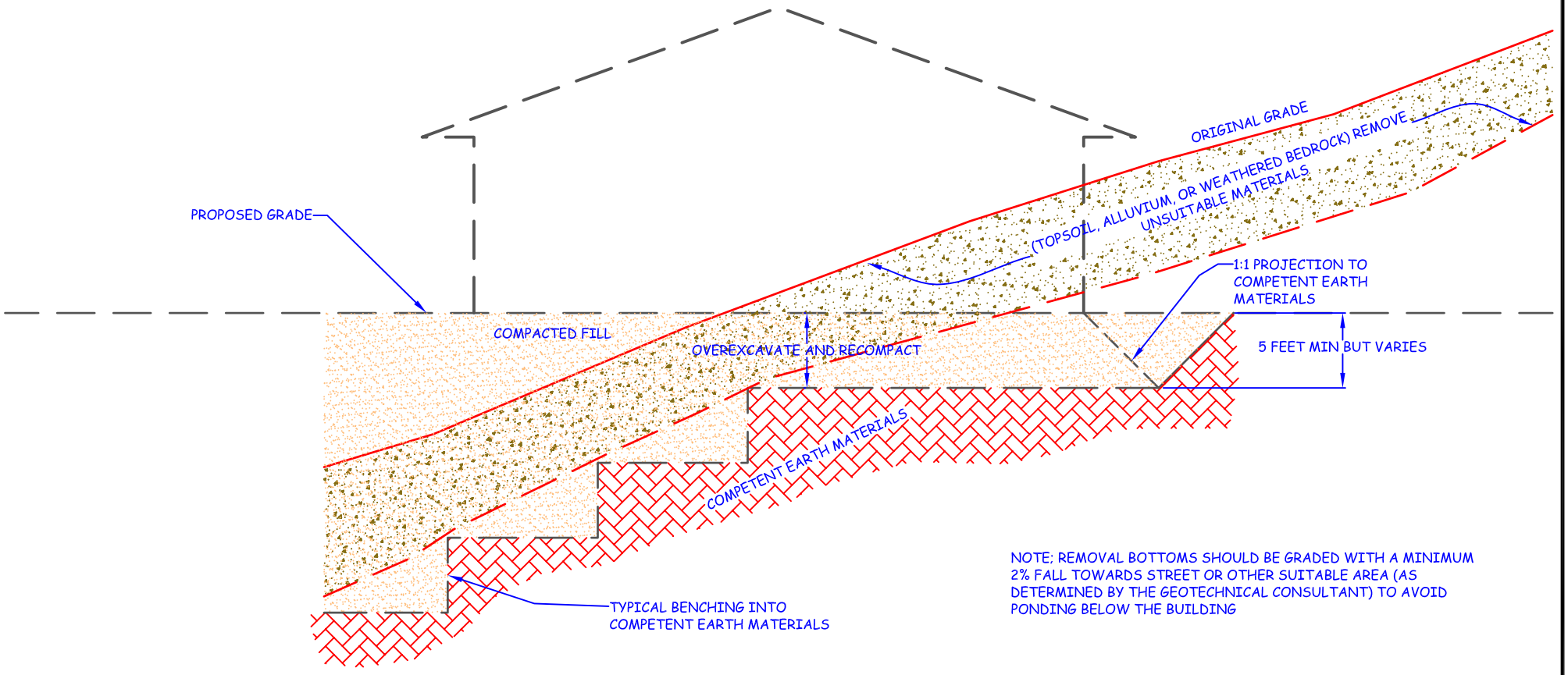


NOTE; REMOVAL BOTTOMS SHOULD BE GRADED WITH A MINIMUM 2% FALL TOWARDS STREET OR OTHER SUITABLE AREA (AS DETERMINED BY THE GEOTECHNICAL CONSULTANT) TO AVOID PONDING BELOW THE BUILDING

NOTE: WHERE DESIGN CUT LOTS ARE EXCAVATED ENTIRELY INTO COMPETENT EARTH MATERIALS, OVEREXCAVATION MAY STILL BY NEEDED FOR HARD-ROCK CONDITIONS OR MATERIALS WITH VARIABLE EXPANSION POTENTIALS

Earth = Strata, Inc.
Geotechnical, Environmental and Materials Testing Consultants
BETTER PEOPLE • BETTER SERVICE • BETTER RESULTS

CUT / FILL TRANSITION LOT TYPICAL DETAIL

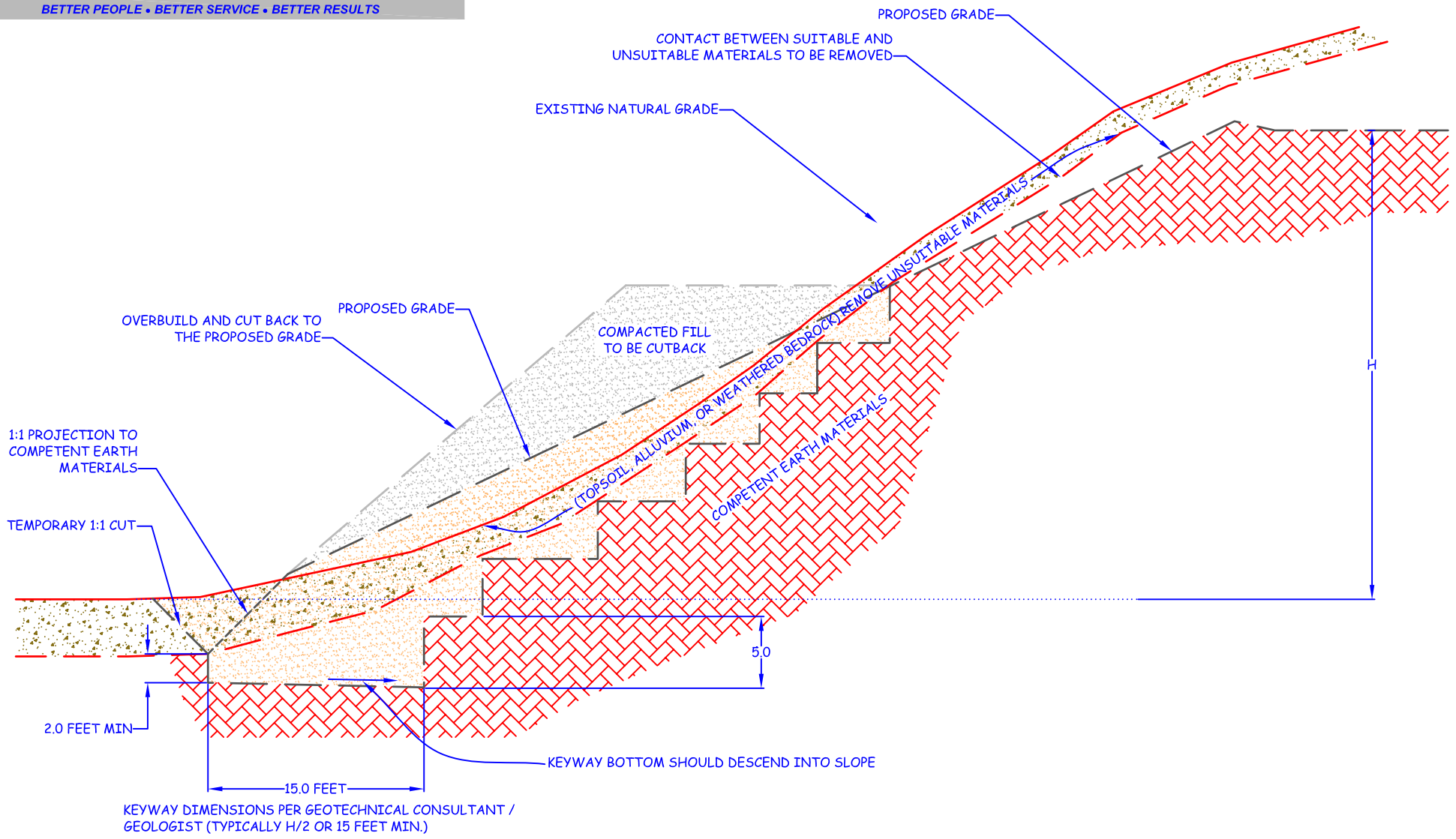


NOTE; REMOVAL BOTTOMS SHOULD BE GRADED WITH A MINIMUM 2% FALL TOWARDS STREET OR OTHER SUITABLE AREA (AS DETERMINED BY THE GEOTECHNICAL CONSULTANT) TO AVOID PONDING BELOW THE BUILDING

NOTE: WHERE DESIGN CUT LOTS ARE EXCAVATED ENTIRELY INTO COMPETENT EARTH MATERIALS, OVEREXCAVATION MAY STILL BY NEEDED FOR HARD-ROCK CONDITIONS OR MATERIALS WITH VARIABLE EXPANSION POTENTIALS

Earth + Strata, Inc.
Geotechnical, Environmental and Materials Testing Consultants
BETTER PEOPLE • BETTER SERVICE • BETTER RESULTS

KEYWAY & BENCHING TYPICAL DETAILS
CUT OVER FILL SLOPE

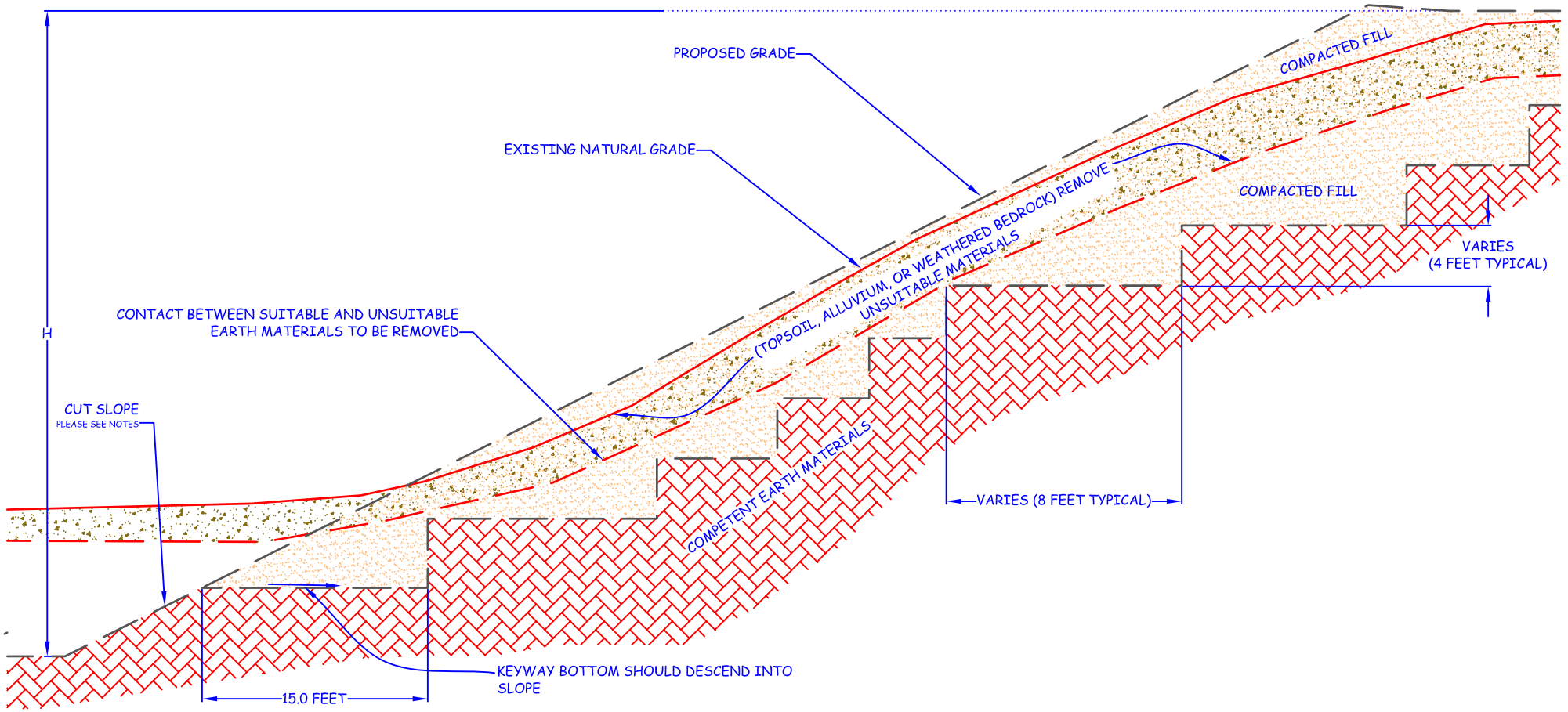


NOTE:

NATURAL SLOPES STEEPER THAN 5:1 (H:V) MUST BE BENCHED INTO COMPETENT EARTH MATERIALS

Earth + Strata, Inc.
Geotechnical, Environmental and Materials Testing Consultants
BETTER PEOPLE • BETTER SERVICE • BETTER RESULTS

KEYWAY & BENCHING TYPICAL DETAILS
FILL OVER CUT SLOPE



KEYWAY DIMENSIONS PER GEOTECHNICAL CONSULTANT / GEOLOGIST (TYPICALLY H/2 OR 15 FEET MIN.)

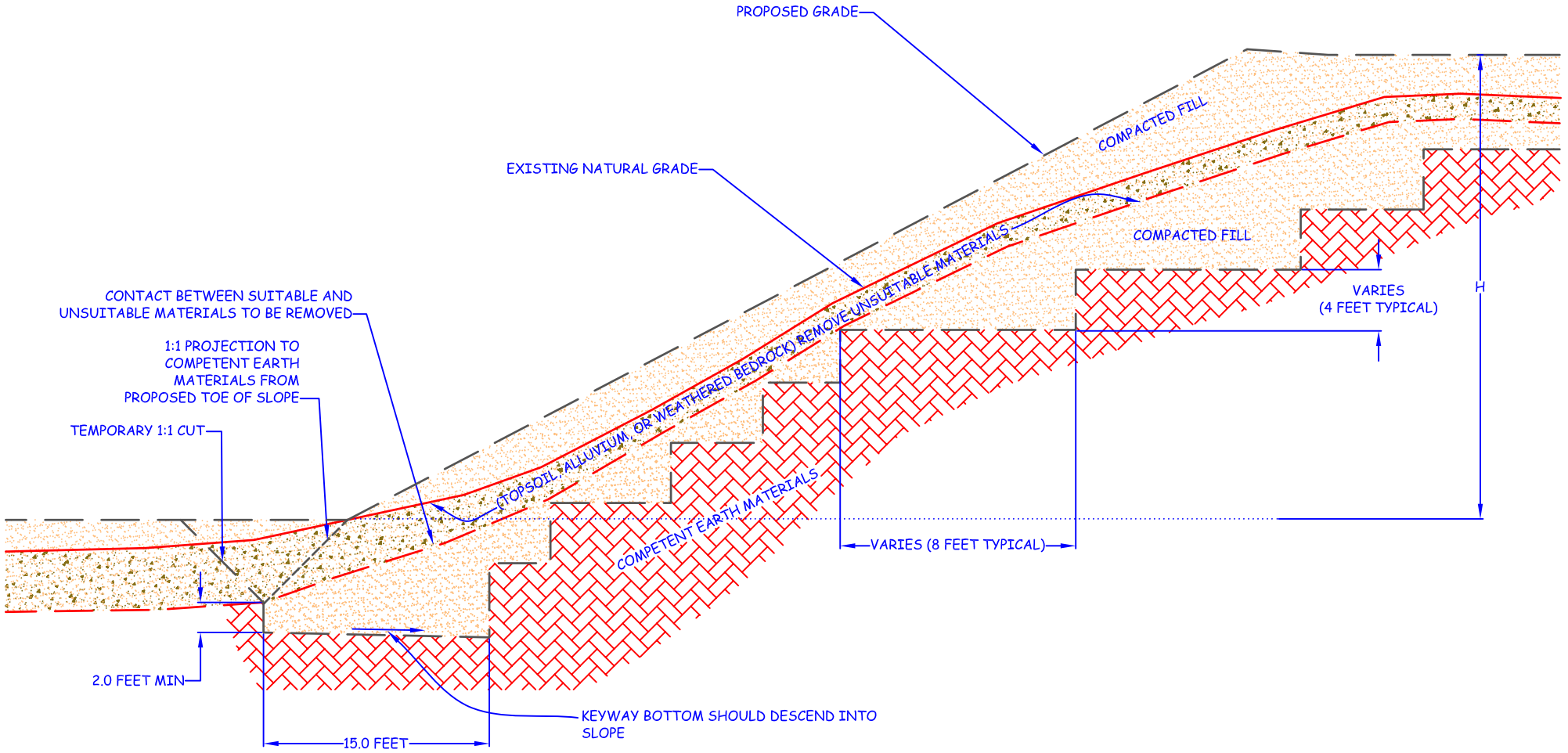
NOTES:

NATURAL SLOPES STEEPER THAN 5:1 (H:V) MUST BE BENCHED INTO COMPETENT EARTH MATERIALS

THE CUT SLOPE MUST BE CONSTRUCTED FIRST

Earth - Strata, Inc.
Geotechnical, Environmental and Materials Testing Consultants
BETTER PEOPLE • BETTER SERVICE • BETTER RESULTS

KEYWAY & BENCHING TYPICAL DETAILS
FILL SLOPE



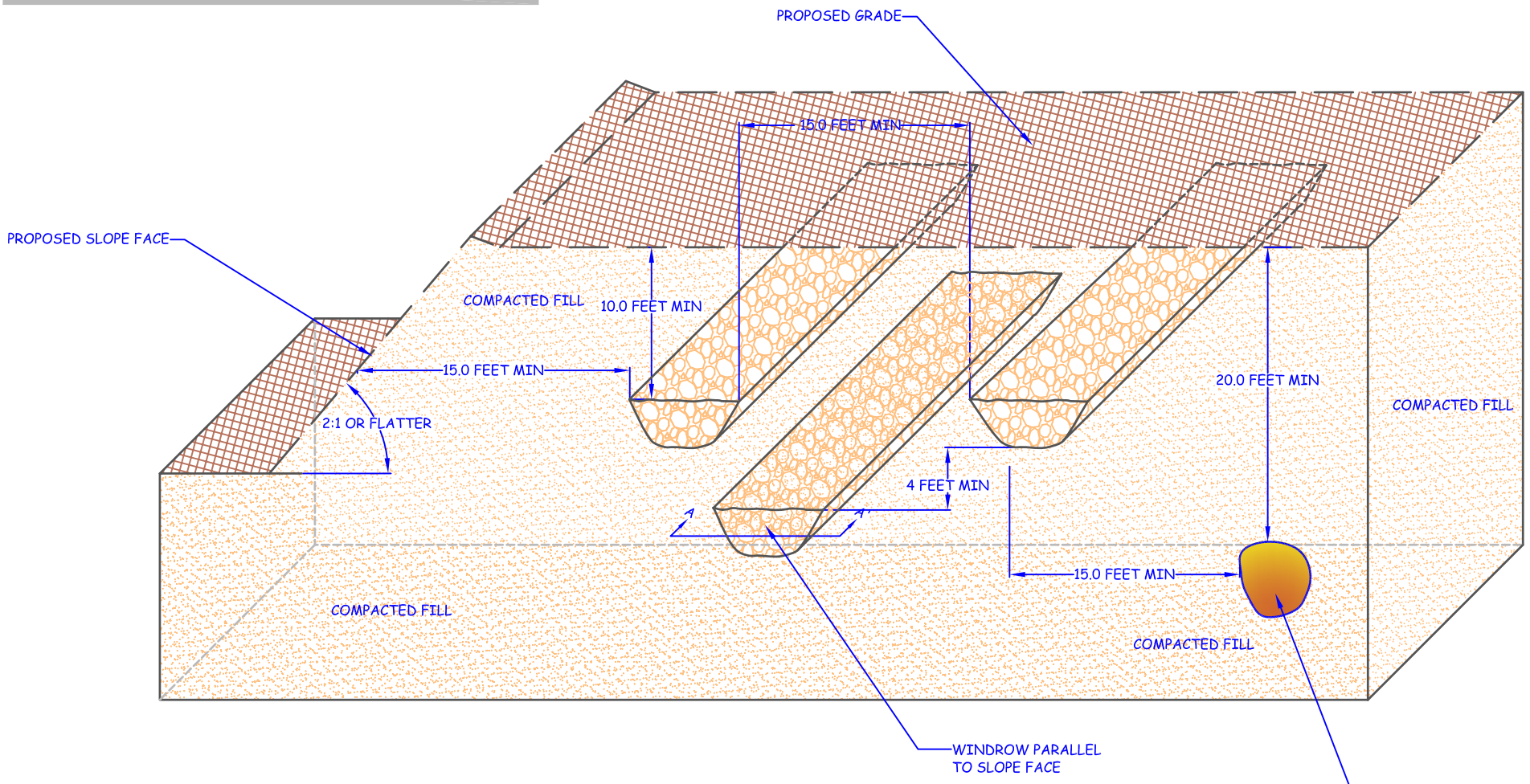
KEYWAY DIMENSIONS PER GEOTECHNICAL CONSULTANT / GEOLOGIST (TYPICALLY H/2 OR 15 FEET MIN.)

NOTES:

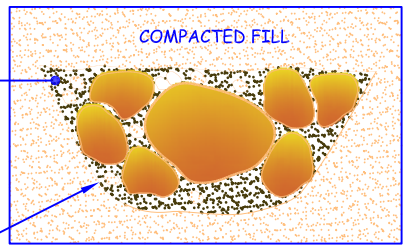
NATURAL SLOPES STEEPER THAN 5:1 (H:V) MUST BE BENCHED INTO COMPETENT EARTH MATERIALS

Earth + Strata, Inc.
Geotechnical, Environmental and Materials Testing Consultants
BETTER PEOPLE • BETTER SERVICE • BETTER RESULTS

OVERSIZE ROCK TYPICAL DETAIL

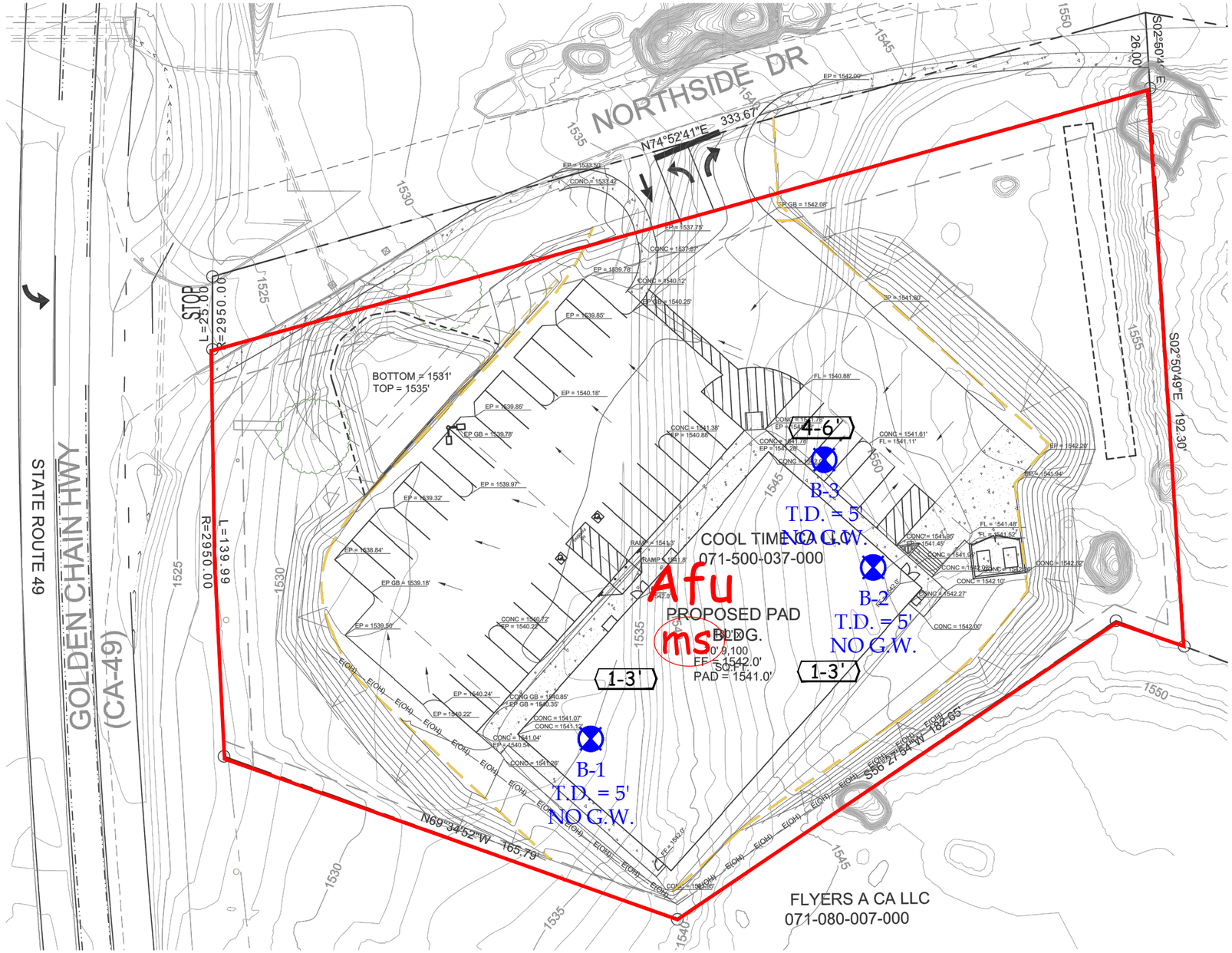


CROSS SECTION A-A'



NOTES:

OVERSIZE ROCK IS LARGER THAN
8 INCHES IN MAX DIAMETER



LEGEND

Locations are Approximate

Geologic Units

Afu	-	Artificial Fill, Undocumented
ms	-	Metasedimentary Rocks (Circled Where Buried)

Symbols

	-	Limits of Report
B-3 T.D. = 5' NO G.W.	-	Boring Location Including Total Depth and Depth to Groundwater
4-6'	-	Recommended Removal Depths

North

GEOTECHNICAL MAP

LOCATED SOUTH OF NORTHSIDE DRIVE
COOL CITY AREA, EL DORADO COUNTY, CALIFORNIA
APN 071-500-037

PROJECT	***PROPOSED COMMERCIAL BUILDING***		
CLIENT	***MR. STEVE POWEL***		
PROJECT NO.	***192774-10A***		
DATE	***SEPTEMBER 2019***		
SCALE	***1:40***		
DWG XREFS			
REVISION			
DRAWN BY	***JDG***	***PLATE***	***1 OF 1***

Earth Strata Geotechnical Services, Inc.
Geotechnical, Environmental and Materials Testing Consultants
www.ESGSINC.com (951) 397-8315

Appendix H

Phase 1 Environmental Site Assessment

PHASE I ENVIRONMENTAL SITE ASSESSMENT

APN 071-500-037
1020 Northside Drive
Cool, El Dorado County, CA 95614
Bole and Associates File # 0515-2019-3598

Prepared for

WoodCrest Companies
Attn: Mr. Steve Powell
1410 Main Street, Suite C
Ramona, CA 92065

Prepared by

BOLE & ASSOCIATES
ENVIRONMENTAL CONSULTANTS
6898 Penny Way
Browns Valley, CA 95918

June 18, 2019

Table of Contents

1. Summary 1
2. Introduction 1
   2.1. Purpose 1
   2.2. Detailed Scope-of-Services 1
   2.3. Significant Assumptions 2
   2.4. Limitations, Exceptions, and Data Gaps 2
   2.5. Special Terms and Conditions 3
   2.6. Reliance 3
   2.7. Environmental Personnel 3
3. Site Description 3
   3.1. Location and Legal Description 3
   3.2. Site and Vicinity Characteristics 3
   3.3. Current Use of the Property 4
   3.4. Descriptions of Structures, Roads, Other Improvements on the Site 4
   3.5. Current Uses of the Adjoining Properties 4
4. User Provided Information 4
   4.1. Title Records 4
   4.2. Environmental Liens or Activity and Use Limitations 4
   4.3. Specialized Knowledge 4
   4.4. Commonly Known or Reasonably Ascertainable Information 5
   4.5. Valuation Reduction for Environmental Issues 5
   4.6. Owner, Property Manager, and Occupant Information 5
   4.7. Reason for Performing Phase I 5
   4.8. Previous Site investigations 5
5. Records Review 5
   5.1. Standard Environmental Record Sources 6
   5.2. Additional Environmental Record Sources 6
   5.3. Standard and Additional Environmental Record Review Results 6
      5.3.1. Federal Environmental Records 6
      5.3.2. State and Tribal Environmental Records 8
      5.3.3. Local Environmental Records 8
      5.3.4. Environmental Lien Search 9
   5.4. Physical Setting Sources and Results 9
6. Historical Use Information on the Property and Adjoining Properties Sources and Results 9
7. Site Observations 11
   7.1. Methodology and Limiting Conditions 11
   7.2. General Site Setting 11
   7.3. Site Observation Findings 11
8. Findings, Opinions, and Conclusions 12
9. Qualification and Signature 13

APPENDIX A: MAPS
APPENDIX B: SITE OBSERVATIONS PHOTOGRAPHS
APPENDIX C: REGULATORY RECORDS REVIEW
APPENDIX D: HISTORICAL RESEARCH DOCUMENTATION
APPENDIX E: QUALIFICATIONS

1. Summary

Bole & Associates has performed a Phase I Environmental Site Assessment (ESA) in general conformance with the scope and limitation of the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments E 1527-13, and the Environmental Protection Agency Standards and Practices for All Appropriate Inquires (AAI) (40 CFR Part 312) for the subject property described as El Dorado County Assessor's Parcel Number 071-500-037, located at 1020 Northside Drive in Cool, El Dorado County, CA 95614. Any exceptions to, or deletions from this practice are described in Section 2.4 of this report. The Phase I Environmental Site Assessment is designed to provide WoodCrest Companies and their assigns with an assessment concerning environmental conditions (limited to those issues identified in the report) as they exist at the subject property. The subject property consists of an approximately 1.69-acre parcel of undeveloped land. No permanent structures or obvious improvements were noted on the subject property. An oval-shaped area of gravel parking lot was noted centrally on the parcel; the remainder of the site was undeveloped land consisting of oaks, pines, and annual grassland vegetation. No hazardous materials in any appreciable quantity were noted on the subject property. Historically the site has been used for agricultural purposes and undeveloped land, having never formally been developed for any commercial, retail, or industrial use. The property is located in a predominantly commercial/retail corridor of Cool and is adjoined to the north by Northside Drive and farther to the north by a multiple tenant retail center (including a restaurant and a post office); to the immediate east and south by undeveloped land; and to the west by multiple-tenant retail/shopping centers. While no initial environmental site assessment can fully eliminate the uncertainty regarding the potential for recognized environmental conditions, the ASTM standard does cite the balance between appropriate levels of inquiry and the cost of such exhaustive investigations. It is Bole & Associate's opinion that a full assessment of the site has been completed. Our investigations did not reveal any Recognized Environmental Conditions associated with the subject property and it is the professional opinion of Bole and Associates that no further investigations are warranted at this time.

2. Introduction

2.1. Purpose

As per Section 1.1 of the American Society of Testing and Materials (ASTM) Standard Practice Designation E 1527-13, the purpose of this assessment is to identify recognized environmental conditions, as defined in Section 3.2.78 of the same Standard Practice; that is "the presence or likely presence of any hazardous substances or petroleum products in, on or at a property due to release to the environment; under conditions indicative of a release to the environment; or under conditions that pose a material threat of a future release to the environment. *De minimis* conditions are not recognized environmental conditions." This practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner defense to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA); that is, the practices that constitute "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" as defined in 42 U.S.C. § 9601(35) (A) & (B). Bole & Associates has conducted this Phase I ESA under the direction a qualified Environmental Professional, whose seal and/or signature appears hereon. This document serves to identify recognized environmental conditions (RECs) in association with the subject property.

2.2. Detailed Scope-of-Services

The Phase I ESA conducted at the subject property was in general accordance with ASTM Standard E 1527-13 and included some or all of the following:

- Review of previous environmental site assessments
- Records review
- Interviews with regulatory officials
- A site visit
- Evaluation of information and preparation of the report provided herein.

Typically, a Phase I ESA does not include sampling or testing of air, soil, groundwater, surface water, or building materials. These activities would be carried out in a Phase II ESA, if required. For this Phase I ESA, no additions to the ASTM E 1527-13 standard were made.

2.3. Significant Assumptions

Bole & Associates believes the results, specifications, conclusions and professional opinions to be accurate and relevant but cannot accept responsibility for the accuracy or completeness of public documentation or accuracy, completeness, or possible withholding of information by interviewees or other private parties. We make no other warranty, either expressed or implied.

It is assumed that this investigation is being conducted to identify recognized environmental conditions (RECs) concerning the subject property, and to permit the user to satisfy one of the requirements to qualify for the innocent landowner defense to CERCLA liability. This investigation may mention but does not fully address non-scope considerations such as:

Asbestos
Radon
Lead-based paint
Lead in drinking water
Wetlands
Regulatory compliance (USACOE, USDA, NRCS)
Cultural and historic resources
Health and safety
Ecological resources
Endangered species
Air quality
Water quality

This property assessment did not include air, soil or water sampling, or laboratory analysis. Therefore, the results of this investigation do not preclude the possibility of substances that are currently or in the future may be defined as hazardous being present on the property. This report does not purport to address all safety problems, if any, associated with the subject property.

2.4. Limitations, Exceptions, and Data Gaps

The scope of services performed to complete this Phase I ESA is limited in nature. Site conditions can change in time, and our assessment is not intended to predict future site conditions. Because of the limited nature of this assessment, site history will be developed based only on information provided by a review of available regulatory files on this site and near-by sites. This report is not a complete risk assessment and the scope of services does not include a complete determination of the extent of, nor the environmental or public health impact of, known or suspected hazardous materials or wastes.

Along with all of the limitations set forth in various sections of the ASTM E 1527-13 protocol, the accuracy and completeness of this report may be limited by the following:
Access Limitations –No access limitations were encountered during site reconnaissance.
Physical Obstructions to Observations – No physical obstructions were noted on site to prevent observations.
Outstanding Information Requests – The current property owner Paul Howard completed an environmental questionnaire form which is included in Appendix F.
Historical Data Source Failure – None.

The information and conclusions contained in this report are based upon work undertaken by trained professionals and technical staff in accordance with generally accepted engineering and scientific practices current at the time the work was performed. The conclusions and recommendations presented represent the best judgment of Bole & Associates based on the data obtained from the work. Due to the nature of investigation and the limited data available, Bole & Associates cannot warrant against undiscovered

environmental liabilities. Conclusions and recommendations presented in this report should not be construed as legal advice.

Should additional information become available which differs significantly from our understanding of conditions presented in this report, we request that this information be brought to our attention so that we may reassess the conclusions provided herein.

The government database search included sites that are within the search range of the subject property. However, sites exist that are in the general vicinity of the subject property without enough information listed to map these "orphan" sites or determine if they are within the search range. The Orphan summary indicated that there are no unmapped orphan sites in the database report.

Based on information obtained during the evaluation process and general knowledge of the history of this vicinity of El Dorado County, it is the opinion of the Bole & Associates representative that the historical subject property uses have been adequately defined.

Aside from the limitation(s) listed above, it is the opinion of David Bole, Environmental Professional that this property assessment provides an appropriate degree of inquiry to determine if RECs exist on the subject property.

2.5. Special Terms and Conditions

Authorization to perform this assessment was given by the client on May 15, 2019. Instructions as to the location of the property, and details of access were supplied by Mr. Steve Powell of WoodCrest Companies.

2.6. Reliance

This report has been prepared for the sole benefit of WoodCrest Companies and their assigns. The report may not be relied upon by any other person or entity without the express written consent of Bole & Associates and the client. Any lender or CDC assisting with the financing or purchase of this property will be provided a letter of reliance upon request.

2.7. Environmental Personnel

This assessment was conducted under the supervision of David H. Bole, Environmental Professional. The following personnel contributed to the assessment:

- David H. Bole, B.S, Environmental Professional, Registered Environmental Property Assessor (REPA) Number 762718, performed site observations, conducted local file reviews, provided supervision, review, and opinions/conclusions.
- Skye A. Bole, B.A, Environmental Professional, Quality Control Project Manager, coordinated and reviewed database searches, conducted first-level and final reviews of all reports and documents in accordance with the principles of ISO 9001.

3. Site Description

The Bole & Associates representative performed a site observation on June 11, 2019.

3.1. Location and Legal Description

The subject property consists of El Dorado County Assessor's Parcel Number 071-500-037, located at 1020 Northside Drive in Cool, El Dorado County, CA 95614. The subject property location is outlined in Appendix A of this report.

3.2. Site and Vicinity Characteristics

The property is located in a predominantly commercial/retail corridor of Cool and is adjoined to the north by Northside Drive and farther to the north by a multiple tenant retail center (including a restaurant and a post office); to the immediate east and south by undeveloped land; and to the west by multiple-tenant retail/shopping centers. The current use of the immediately adjacent properties is presented in Section 3.5

of this report. For information regarding the physical setting and soil composition in the general area of the subject property refer to section 5.4.

3.3. Current Use of the Property

At the time of the June 11, 2019 site observation the subject property was undeveloped land.

3.4. Descriptions of Structures, Roads, Other Improvements on the Site

At the time of the June 11, 2019 site observation structures, roads, and other improvements for the subject properties include the following:

- An approximately 1.69-acre parcel of undeveloped land.
- No structures, roads, or other improvements were readily apparent on the subject property.
- An oval-shaped area of gravel surfacing was noted centrally in the parcel; the remainder of the site was undeveloped land and contained oaks, pines, and annual grassland vegetation.
- No utilities, water, sewer, or other improvements were readily apparent on the subject property. It is assumed that any future development of the parcel will involve connections to municipal water and power utilities.
- Access to the site is gained from the west via Highway 49 and from the north via Northside Drive.

3.5 Current Uses of the Adjoining Properties

During the vicinity reconnaissance, Bole & Associates observed the following land use on properties in the immediate vicinity of the subject property:

Direction	Property(description); APN/Address; Site Use (NAICS code)
North	Northside Drive; multiple-tenant retail/shopping center, 1020/1040 Northside Drive, including a restaurant, a post office, and beauty salon (NAICS722511/561431/812112)
East	Undeveloped land
South	Undeveloped land
West	Retail/Shopping center, 2966 Highway 49, includes a veterinary clinic, a child care center, and a restaurant (NAICS 541940/623310/722511); retail/shopping center, 2976 Highway 49, includes a market, a restaurant, realty offices, and a hair salon (NAICS 445120/722511/531210/812112)

4. User Provided Information

4.1. Title Records

A Preliminary Title Report (PTR) was not available for review.

4.2. Environmental Liens or Activity and Use Limitations

There was no report or record of any environmental liens, activity, and/or use limitations due to hazardous material issues on the subject or surrounding properties. On May 16, 2019 EDR® searched the LIENS, LIENS 2, DEED, US ENG CONTROLS, and US INST CONTROLS databases. The subject property was not listed in any of these databases. A search of environmental liens was conducted by EDR® on May 17, 2019; no environmental liens were found associated with the subject property.

4.3. Specialized Knowledge

The subject property address of 1020 Northside Drive, which the subject property shares with several retail businesses in the adjoining retail center to the north, was not listed in any of the databases searched by EDR, Inc. No other specialized information was provided to Bole and Associates.

4.4. Commonly Known or Reasonably Ascertainable Information

All commonly known, or reasonably ascertainable information is described in this report.

4.5. Valuation Reduction for Environmental Issues

Based upon physical observations and from a review of historical sources, no environmental issues were identified that could result in property value reduction.

4.6. Owner, Property Manager, and Occupant Information

The property information is presented in the table below:

Property Owner	Mr. Paul Howard
Property Occupant	N/A-undeveloped land
Property Onsite Contact(s)	Mr. Steve Powell

4.7. Reason for Performing Phase I

The Phase I ESA is being conducted as part of environmental due diligence by WoodCrest Companies and their assigns.

4.8. Previous Site Investigations

No previous site investigations were available for review for the subject property.

5. Records Review

The comprehensive EDR® Radius Map™ Report with GeoCheck® Report is provided as a searchable document attached to the general deliverable. The report includes descriptions of standard and additional environmental records searched, original source of information, approximate search distance, date information was last updated by EDR®, and date information was last updated by original source.

Bole & Associates contracted Environmental Data Resources, Inc. (EDR®) to conduct a search of Federal and State databases containing known and suspected sites of environmental contamination. The number of listed sites identified within the approximate minimum search distance (AMSD) from the Federal and State environmental records database listings specified in ASTM Standard E 1527-13 are summarized in the following table. Detailed information for sites identified within the AMSDs is provided below, along with an opinion about the significance of the listing to the analysis of recognized environmental conditions in connection with the subject property.

Standard Environmental Record Sources	Additional Environmental Record Sources
Federal NPL Site List	State and Local HIST CAL-SITES
Federal Proposed NPL Site List	State and Local CA BOND EXP PLAN List
Federal Delisted NPL Site List	State and Local SCH List
Federal NPL Liens Site List	State and Local WDS List
Federal LIENS2 List	State and Local NPDES List
Federal CORRACTS List	State and Local Cortese List
Federal US ENG CONTROLS List	State and Local HIST CORTESE List
Federal US INST CONTROL List	State and Local SWRCY List
Federal DOT OPS List	State and Local LEAKING UNDERGROUND STORAGE TANK Sites
Federal US CDL List	State and Local CA FID UNDERGROUND STORAGE TANK Sites
Federal US BROWNFIELDS List	State and Local SLIC List
Federal Department of Defense Site	State and Local UST Sites
Federal Formerly Used Defense Sites	State and Local HIST UST Sites
Federal LUCIS List	State and Local SWEEPS UST List
Federal CONSENT List	State and Local CHMIRS List
Federal ROD List	State and Local ABOVEGROUND STORAGE TANK Sites
Federal UMTRA Sites	State and Local NOTIFY 65 List
Federal DEBRIS REGION 9 List	State and Local VCP List

Federal ODI List	State and Local DRYCLEANERS Sites
Federal MINES List	State and Local RESPONSE List
Federal TSCA List	State and Local HAZNET List
Federal FTTS List	State and Local EMI List
Federal HIST FTTS List	State and Local ENVIROSTOR List
Federal SSTS List	State and Local HWP List
Federal ICIS List	State and Local PROC List
Federal PADS List	State and Local EDR PROPRIETARY RECORDS List
Federal MLTS List	State and Local Toxic Pits List
Federal RADINFO List	State and Local SWF/LF List
Federal RAATS List	State and Local WMUDS/SWAT List
Federal SCRD DRYCLEANERS Sites	State and Local LIENS List
Federal UST HIST CDL List	State and Local LDS List
Federal PCB TRANSFORMER List	State and Local MCS List
Federal Facility Site Information List	State and Local DEED List
Federal COAL ASH DOE List	State and Local WIP List
Federal FEMA UST List	State and Local CDL List
Federal COAL ASH EPA List	State and Local ENF List
Federal CERCLIS List	State and Local HAULERS List
Federal CERCLIS NFRAP List (SEMS)	State and Local MWMP List
Federal RCRA TSDF List	State and Local HWT List
Federal RCRA Large Quantity Generators List	Tribal INDIAN RESERV List
Federal RCRA Small Quantity Generators List	Tribal INDIAN ODL List
Federal RCRA CESQG List	State and Tribal INDIAN LUST List
Federal RCRA NONGEN List	Tribal INDIAN UST List
Federal ERNS List	Tribal INDIAN VCP List
Federal HMIRS List	
Federal TRIS List	
Federal FINDS List	

5.1. Standard Environmental Record Sources

Information on standard environmental records was provided by EDR® on May 16, 2019. Sections 5.3.1 and 5.3.2 discuss the results of this review.

5.2. Additional Environmental Record Sources

The following is a list of additional local environmental and historic record sources contacted/reviewed by the Bole & Associates representative:

- State Water Resources Control Board GeoTracker® Database
- El Dorado County Environmental Health Department

5.3. Standard and Additional Environmental Record Review Results

A summary of results for EDR® revealed multiple sites within the radius search required by the ASTM Standard practice. The subject property address of 1020 Northside Drive, which the subject property shares with several other retail businesses in the adjoining retail center to the north, was not listed in any of the databases searched by EDR, Inc. None of the immediately adjoining properties were listed in any of the databases searched by EDR, Inc.

5.3.1. Federal Environmental Records

Sites identified within the search radius of the subject property in the Federal State Regulatory records databases are as follows: none.

5.3.2 State and Tribal Environmental Records

Sites identified within the search radius of the subject property in the California State Regulatory records databases are as follows:

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents in the state of California. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System. A review of the LUST list, as provided by EDR®, has revealed that there is one (1) LUST site within the searched area, located approximately 350 feet to the west-southwest. According to records reviewed with the California Regional Water Quality Control Board (CRWQCB) and the El Dorado County Environmental Health Department (EDCEHD), the Sierra Super Stop property located at 2968 Highway 49 in Cool is currently undergoing remediation to the onsite soils and groundwater stemming from a release of gasoline first reported in 2005. The site has been assigned a case number with CRWQCB (Region 5S, Case # 090101), with the responsible party being named as Tom's Sierra. Remediation at the site to date has included the excavation/disposal of affected soil, the installation of groundwater monitoring wells, and the installation of vapor extraction wells. The contamination at the site has been defined and is limited to the soil and shallow groundwater. According to the latest available groundwater monitoring report, dated December 2018, groundwater in the vicinity of the Sierra Super Stop property has been demonstrated to flow towards the west, and therefore any potential environmental hazards originating at the LUST site would tend to be carried away from the subject property. Based on the status and location of this site it is not considered a recognized environmental condition in association with the subject property.

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database. A review of the UST list, as provided by EDR®, has revealed that there is one (1) UST site within the searched area (Sierra Superstop, 2968 Highway 49). According to information provided by the EDCEHD, the tanks servicing this gasoline station have all been tested tight and have passed their most recent monitoring system and secondary containment system testing. Based on the status and location of this site it is not considered a recognized environmental condition in association with the subject property.

CERS HAZ WASTE: This database includes a 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. A review of the CERS HAZ WASTE list, as provided by EDR, and dated 4/9/2019, has revealed that there are two (2) CERS HAZ WASTE sites located within the searched area. Based on the status and location of these sites they are not considered recognized environmental conditions in association with the subject property.

SWEEPS UST: This database includes the California 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. A review of the SWEEPS UST list, as provided by EDR®, and dated 06/01/1994 has revealed that there are three (3) SWEEPS UST sites within the searched area. Based upon the status and location of these sites they are not considered recognized environmental conditions in association with the subject property.

HIST UST: This database includes the Historical UST Registered Database. A review of the HIST UST list, as provided by EDR®, and dated 10/15/1990, has revealed that there are two (2) HIST UST sites within the searched area. Based on the status and location of these sites they are not considered recognized environmental conditions in association with the subject property.

CERS TANKS: This database includes a 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. A review of the CERS TANKS list, as provided by EDR, and dated 4/9/2019, has revealed that there is one (1) CERS TANK site within the searched area (Sierra Super Stop, 2968 Highway 49). Based on the status and location of this site it is not considered a recognized environmental condition in association with the subject property.

CORTESE: The sites for this 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). A review of the Cortese list, as provided by EDR®, and dated 3/25/2019, has revealed that there is one (1) Cortese site within approximately 0.5-miles of the target property (Sierra Super Stop, 2968 Highway 49). Based on the status and location of this site it is not considered a recognized environmental condition in association with the subject property.

CUPA Listings: This database includes 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. A review of the CUPA Listings list, as provided by EDR®, has revealed that there is one (1) CUPA Listings site within the searched area (Verizon Wireless, 1050 Northside Drive). Based on the status and location of this site it is not considered a recognized environmental condition in association with the subject property.

HIST CORTESE: The sites listed for the HIST CORTESE list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Control Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites). This listing is no longer updated by the state agency. A review of the HIST CORTESE list, as provided by EDR®, and dated 04/01/2001 has revealed that there is one (1) HIST CORTESE sites within the searched area. Based upon the status and location of this site it is not considered a recognized environmental condition in association with the subject property.

EDR PROPRIETARY RECORDS

RGA LUST: 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. This list is compiled from Records formerly available from the State Water Resources Control Board in California. A review of the RGA LUST list, as provided by EDR® has revealed that there is one (1) RGA LUST site within the searched area. Based upon the status and location of this site it is not considered a recognized environmental condition in association with the subject property.

Orphan Summary:
The above government database search included sites that are within the ASTM search range of the subject property. However, sites exist that are in the general vicinity of the subject property without enough information listed to map these "orphan" sites or determine if they are within the ASTM search range. The Orphan summary indicates that there are no unmapped sites within the searched area.

5.3.3. Local Environmental Records

State Water Resources Control Board GeoTracker® Database

Bole and Associates reviewed the on-line State Water Resources Control Board GeoTracker® Database. The subject property was not listed in GeoTracker. None of the immediately adjoining properties were listed in GeoTracker. The Sierra Super Stop property, located approximately 350 feet to the west-southwest, was listed in GeoTracker; this property is currently undergoing remediation as described in the LUST database in Section 5.3.2.

El Dorado County Environmental Health Department
Bole and Associates contacted the El Dorado County Environmental Health Department in an effort to review any available regulatory documents associated with the subject property. EDCEHD did not have any documents available for review for the subject property.

5.3.4. Environmental Lien Search

There was no report or record of any environmental liens, activity, and/or use limitations due to hazardous material issues on the subject or surrounding properties. On May 16, 2019 EDR® searched the LIENS, LIENS 2, DEED, US ENG CONTROLS, and US INST CONTROLS databases. The subject property was not listed in any of these databases. A search of environmental liens was conducted by EDR® on May 17, 2019; no environmental liens were found associated with the subject property.

5.4. Physical Setting Sources and Results

The elevation of the subject property is approximately 1,540 feet above mean sea level, as depicted on the U.S.G.S. 7.5 Minute Series Topographic Map of the AUBURN (1981) USGS Quadrangle. The topography within the confines of the subject property slopes towards Highway 49 to the west. The eastern portion of the site is at the highest elevation; the property flattens out towards the center (in the gravel parking area); the property then slopes sharply towards the west in the western portion of the parcel.

Subject Property Soil Associations:
A soil map was prepared using the NRCS Web Soil Survey application. A brief description of the dominant soil type present on the subject property is presented in the table below:

Soil Association	Areas of Occurrence	Landform Groups	Potential Soil Hazards Characterization/Hydric status
Auburn silt loam	Lower foothills of the Sierra Nevada Mountains	Undulating to very steep foothills. Formed in material weathered from amphibolites schist and greenstone schist.	Low. These soils are well-drained with slow infiltration rates. These soils are not classified as being hydric.
Delpiedra very rocky loam	Foothills of the Sierra Nevada Mountains	Steep to very steep ridges; formed in residuum weathered from serpentine.	Low. These soils are well-drained with very slow infiltration rates. These soils are not classified as being hydric.

Maps and other information regarding the onsite soils are presented in Appendix F.

National Wetlands Inventory

Bole and Associates referenced the subject property location against known wetlands mapped in the U. S. Fish and Wildlife Service's National Wetlands Inventory. According to NWI, there are no identified NWI wetlands located within the subject property.

Geologic Information Sources:

U.S. Geological Survey. "AUBURN," California (1981). 1:24,000. 7.5 Minute Series. U.S. Department of Interior, USGS.

Natural Resources Conservation Service Web Soil Survey. http://www.websoilsurvey.sc.egov.usda.gov

National Wetlands Inventory Wetlands Mapper http://fws.gov/wetlands/Data/Mapper.html

6. Historical Use Information on the Property and Adjoining Properties Sources and Results

Historical information identifying the past site use was obtained from a variety of sources as detailed in Appendix D of this report and included: aerial photographs, historical USGS topographic maps, and historic city directories supplied by EDR®. The subject property has never been formally developed for any commercial, retail, or industrial purpose. The vicinity of the subject property has been developed primarily for commercial and retail purposes.

Aerial Photographs

Historical aerial photographs were reviewed to determine past land use patterns of the subject and surrounding properties. Photographs covering the years 1938-2016 were available for review. The results of the review are as follows:

Year(s)	Scale	Description
1938-1975	1" = 500'	The subject property and immediately adjoining properties to the north, east, and south appear as undeveloped land. To the west-southwest is shown a retail/shopping center.
1984	1" = 500'	The subject property and immediately adjoining properties to the east and south are shown as undeveloped land. To the north is shown Northside Drive, with a retail/shopping center shown farther to the north. Additional commercial/retail development is shown to the west across Highway 49.
1993-2016	1" = 500'	The subject property and immediately adjoining properties to the north, east, and south appear as shown on the 1984 photograph. An additional retail/shopping center is shown developed to the west.

Historical Topographic Maps

Historical topographic maps were reviewed to determine past land use patterns of the subject and surrounding properties. Maps spanning the years 1891-2012 were reviewed. The results are as follows:

Year	Target Quad	Description
1891-1893	Sacramento	The subject property and immediately adjoining properties on all sides are shown as undeveloped land.
1944	Auburn	The subject property and immediately adjoining properties to the north, east, and south are shown as undeveloped land. To the west across Highway 49 is shown a residence.
1947-2012	Auburn	The subject property and immediately adjoining properties to the north, east, and south appear as undeveloped land. Commercial development is shown to the west across Highway 49.

Sanborn® Fire Insurance Maps

Sanborn® Fire Insurance Maps with coverage of the subject property were sought through EDR®. Sanborn® Fire Insurance Maps are detailed drawings of site development and were typically used by fire insurance companies to determine site fire insurability. Sanborn Fire Insurance Maps were not available for the vicinity of the subject property.

City Directory Search

Historical City Directories were searched for the vicinity of the subject property. The subject property has never been formally developed; however, the property shares the street address of 1020 Northside Drive with several of the adjoining commercial properties to the north. 1020 Northside Drive is initially listed in the 1985 directory as containing Homesteaders Life and US Postal Service. 1020 Northside Drive is subsequently listed in 1989 as containing Cool Chiropractor, Cool Divide Video, Divide Family Chiropractor, and David Gleason; in 1992 as containing David Gleason; in 1995 as containing Lori Burtch Enterprises, Divide Family Chiropractic, Northside Development, Precision Built Construction, The Happy Palace, U.S. Computer Works, and US Postal Service; in 2000 as containing Cool Computers, Divide Family Chiropractic, Happy Palace, and US Postal Service; in 2005 as containing Calico Rose Corner Book Shoppe, Cool Bookkeeping and Tax Service; Cool Massage Therapy, Doc Frys, Happy Palace, and US Postal Service; in 2010 as containing Calico Rose Corner Book Shoppe, Chan Suk Shan, Cool Massage Therapy, Doc Frys, Happy Palace, Greenwood Smith Associates, and US Postal Service; and in 2014 as containing Chan Suk Shan, Cool Massage Therapy, Doc Frys, Happy Palace, Greenwood Smith Associates, and US Postal Service. The complete City Directory listings for the adjacent properties are included in Appendix D.

7. Site Observations

7.1. Methodology and Limiting Conditions

Site observations were conducted on foot on June 11, 2019. Weather conditions at the time of the site observations were sunny and clear. Photographs of pertinent site features identified during the site observations are included in Appendix B.

7.2. General Site Setting

The property is located in a predominantly commercial/retail corridor of Cool and is adjoined to the north by Northside Drive and farther to the north by a multiple tenant retail center (including a restaurant and a post office); to the immediate east and south by undeveloped land; and to the west by multiple-tenant retail/shopping centers (see Appendix A).

7.3. Site Observation Findings

7.3.1. Hazardous Substances

The subject property is currently undeveloped/vacant land. No hazardous materials in any appreciable quantity were noted within the confines of the subject property.

7.3.2. Petroleum Products

No petroleum products were noted on the subject property.

7.3.3. USTs

According to records searched by EDR, Inc., records reviewed at the El Dorado County Environmental Health Department, the subject property has no history of underground petroleum storage tank use. No superficial indicators of UST use were noted during the site visit, including dispensers, fill pipes, or vent pipes.

7.3.4. ASTs

No aboveground storage tanks were noted on the subject property.

7.3.5. Other Suspect Containers

Other suspect containers were not identified on the subject property during the records search or during on-site observations.

7.3.6. Equipment Likely to Contain PCBs

Equipment likely to contain PCB material was not identified on the subject property during the records search or on-site observations.

7.3.7. Interior Staining/Corrosion

There are no structures on the subject property.

7.3.8. Discharge Features

No obvious discharge features were noted on the subject property. It is assumed future development of the site will include connections to municipal sewer services and to the storm water system.

7.3.9. Pits, Ponds, and Lagoons

No ponds or lagoons were noted on the subject property.

7.3.10. Solid Waste Dumping/Landfills

No significant indications of solid waste dumping were noted on the subject property. No obvious signs of hazardous materials dumping were noted during the site inspection.

7.3.11. Stained Soil/Stressed Vegetation

No stained soil or stressed vegetation was observed on the subject property during the on-site observations.

7.3.12. Wells

No wells were noted on the subject property. It is assumed that future development of the site will include connections to municipal water lines.

7.3.13. Interviews

An environmental questionnaire was completed for the site by current property owner Mr. Paul Howard and is included in Appendix F. No indications of any current Recognized Environmental Conditions were noted during the review of the questionnaire.

7.3.14. Vapor Intrusion

Vapor intrusion is the migration of Volatile Organic Compounds (VOCs) from the subsurface into buildings. VOCs are compounds or chemicals including products such as gasoline, diesel, solvents, certain pesticides, Polynuclear Aromatic Hydrocarbons (PAHs), and other organic compounds with sufficient volatility and toxicity to pose a vapor intrusion risk. If there are, or are likely to be, buildings within 100 feet of a VOC source area of contaminated soil or within 100 feet of a VOC groundwater plume, soil gas data will be needed to assess vapor intrusion risk. The California Department of Toxic Substances Control (DTSC) requires that the human health risk be evaluated at sites if volatile chemical contamination is present. Some of the physical features that are indicative of chemical releases are: storage tanks and storage areas, areas with odors or stressed vegetation, waste piles, pools of liquid, electrical or hydraulic equipment, unidentified containers, drains and sumps, stained soil and pavement, degraded floors and walls, pits, ponds, and lagoons, dry wells and injection wells, wash racks and oil/water separators, waste processing areas, solvent dipping tanks and spray booths, and waste transfer areas. The subject property was evaluated during onsite inspections to determine if any of the above physical features were present in such a manner to present an elevated risk of vapor intrusion into onsite buildings. A comprehensive evaluation of the current and historical features, structures, and activities at the subject property did not reveal potential locations of releases of hazardous chemicals to the environment. The potential for vapor migration and/or vapor intrusion on this property is considered low.

8. Findings, Opinions, and Conclusions

Bole & Associates has performed a Phase I Environmental Site Assessment (ESA) in general conformance with the scope and limitation of the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments E 1527-13, and the Environmental Protection Agency Standards and Practices for All Appropriate Inquires (AAI) (40 CFR Part 312) for the subject property described as El Dorado County Assessor's Parcel Number 071-500-037, located at 1020 Northside Drive in Cool, El Dorado County, CA 95614. Any exceptions to, or deletions from this practice are described in Section 2.4 of this report. The Phase I Environmental Site Assessment is designed to provide WoodCrest Companies and their assigns with an assessment concerning environmental conditions (limited to those issues identified in the report) as they exist at the subject property. The subject property consists of an approximately 1.69-acre parcel of undeveloped land. No permanent structures or obvious improvements were noted on the subject property. An oval-shaped area of gravel parking lot was noted centrally on the parcel; the remainder of the site was undeveloped land consisting of oaks, pines, and annual grassland vegetation. No hazardous materials in any appreciable quantity were noted on the subject property. Historically the site has been used for agricultural purposes and undeveloped land, having never formally been developed for any commercial, retail, or industrial use. The property is located in a predominantly commercial/retail corridor of Cool and is adjoined to the north by Northside Drive and farther to the north by a multiple tenant retail center (including a restaurant and a post office); to the immediate east and south by undeveloped land; and to the west by multiple-tenant retail/shopping centers. While no initial environmental site assessment can fully eliminate the uncertainty regarding the potential for recognized environmental conditions, the ASTM standard does cite the balance between appropriate levels of inquiry and the cost of such exhaustive investigations. It is Bole & Associate's opinion that a full assessment of the site has been completed. Our investigations did not reveal any Recognized Environmental Conditions associated with the subject property and it is the professional opinion of Bole and Associates that no further investigations are warranted at this time.

9. Qualifications and Signature

Bole & Associates has performed this assessment under my supervision in accordance with generally accepted environmental practices and procedures, as of the date of this report. 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. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312. I have employed the degree of care and skill ordinarily exercised under similar circumstances by reputable environmental professionals practicing in this area. The conclusions contained within this assessment are based upon site conditions readily observed or were reasonably ascertainable and present at the time of the site observations.

Prepared and Certified By:

David Bole, B.S.
Principal Environmental Scientist
Registered Environmental Assessor
National Registry REPA 762718

Final Review and Certification:

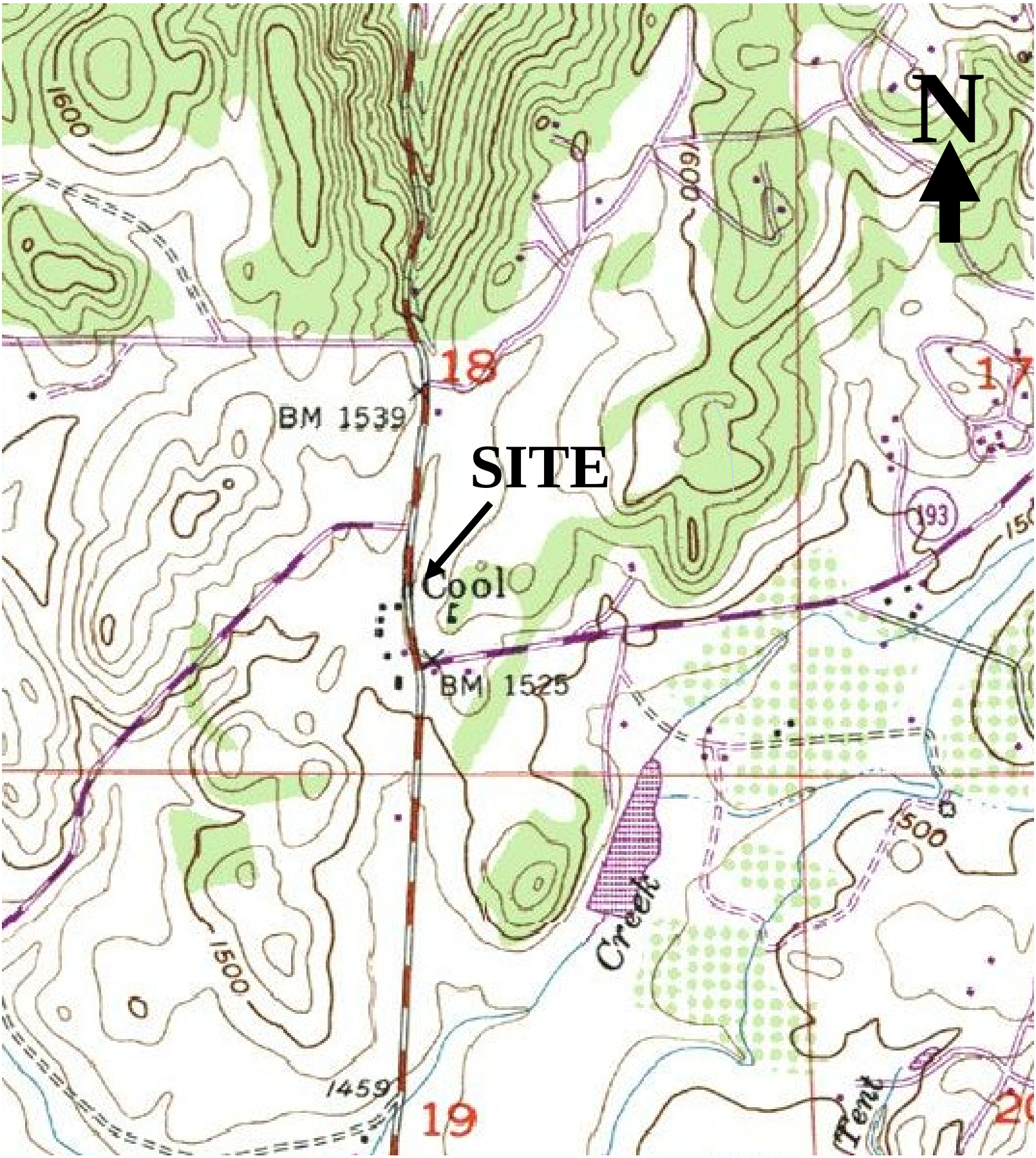
Skye A Bole, B.A.
Environmental Professional

APPENDIX A: MAPS

FIGURE 1: SITE LOCATION MAP

FIGURE 2: VICINITY MAP

FIGURE 3: SITE MAP-AERIAL OVERLAYY



Site Location Map: APN 071-500-037, 1020 Northside Drive, Cool, El Dorado County, CA 95614. Section 18, Township 12 North, Range 9 East, Auburn (1981) USGS Quadrangle.

Figure 1

Vicinity Map: APN 071-500-037, 1020 Northside Drive, Cool, El Dorado County, CA 95614. Site is shown surrounded by undeveloped land and multiple tenant retail/shopping centers.

Figure 2

BOLE & ASSOCIATES
6898 Penny Way, Browns Valley, CA 95918
(530) 415-6623, email: davidhbole@yahoo.com

SITE: APN 071-500-037/1020 NORTHSIDE DRIVE, COOL, CA
ITEM: SITE MAP- AERIAL OVERLAY

FIGURE 3

APPENDIX B: SITE RECONAISSANCE PHOTOGRAPHS

PHOTO PLATE 1: SITE PHOTOGRAPHS

PHOTO PLATE 2: ADJOINING PROPERTIES

BOLE & ASSOCIATES
6898 Penny Way, Browns Valley, CA 95918
(530) 415-6623, email: davidhbole@yahoo.com

SITE: APN 071-500-037, COOL, CA
ITEM: SITE PHOTOS
DATE: 6/11/2019 PLATE: 1

USPS/shopping center to the north

Undeveloped land to the east

Undeveloped land to the south

Retail center to the SW

Retail center to the west

View to the northeast

BOLE & ASSOCIATES
6898 Penny Way, Browns Valley, CA 95918
(530) 415-6623, email: davidhbole@yahoo.com

SITE: APN 071-500-037, COOL, CA
ITEM: ADJOINING PROPERTIES
DATE: 6/11/2019 PLATE: 2

APPENDIX C: REGULATORY RECORDS REVIEW

EDR® RADIUS MAP™ REPORT

APN 071-500-037
1020 Northside Drive
Cool, CA 95614

Inquiry Number: 5654784.2s
May 16, 2019

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	62
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting SSURGO Soil Map	A-5
Physical Setting Source Map	A-9
Physical Setting Source Map Findings	A-11
Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2019 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

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 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

1020 NORTHSIDE DRIVE
COOL, CA 95614

COORDINATES

Latitude (North):	38.8884970 - 38° 53' 18.58''
Longitude (West):	121.0155340 - 121° 0' 55.92''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	672119.6
UTM Y (Meters):	4306067.0
Elevation:	1535 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5619680 AUBURN, CA
Version Date:	2012
Northeast Map:	5603962 GREENWOOD, CA
Version Date:	2012
Southeast Map:	5603960 COLOMA, CA
Version Date:	2012
Southwest Map:	5629064 PILOT HILL, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140713
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
1020 NORTHSIDE DRIVE
COOL, CA 95614

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	VERIZON WIRELESS COO	1050 NORTHSIDE DR	CUPA Listings, CERS	Higher	223, 0.042, East
A2	SIERRA SUPER STOP #2	2968 HWY 49	RGA LUST	Lower	341, 0.065, WSW
A3	SIERRA SUPERSTOP #2	2968 HWY 49	UST	Lower	341, 0.065, WSW
A4	SIERRA SUPER STOP #2	2968 HWY 49	LUST, CERS HAZ WASTE, SWEEPS UST, CERS TANKS,...	Lower	341, 0.065, WSW
B5	NORTHSIDE MIDDLE-ELE	3000 STATE HIGHWAY 4	SWEEPS UST, HIST UST	Lower	464, 0.088, SSW
B6	NORTHSIDE SCHOOL	3000 HIGHWAY 49	HIST UST, HAZNET	Lower	464, 0.088, SSW
B7	THE GARAGE AUTOMOTIV	3006 SUITE G HWY 49	CERS HAZ WASTE, CERS	Lower	487, 0.092, South
8	EL DORADO CO FIRE PR	7200 ST. FLORIN RD	SWEEPS UST	Lower	602, 0.114, WNW

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

Federal NPL site list

NPL ---------- National Priority List
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

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

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

LUCIS ---------- Land Use Control Information System
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 - equivalent CERCLIS

ENVIROSTOR ---------- EnviroStor Database

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---------- Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land
CPS-SLIC ---------- Statewide SLIC Cases

State and tribal registered storage tank lists

FEMA UST ---------- Underground Storage Tank Listing
AST ---------- Aboveground Petroleum Storage Tank Facilities
INDIAN UST ---------- Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

INDIAN VCP ---------- Voluntary Cleanup Priority Listing
VCP ---------- Voluntary Cleanup Program Properties

State and tribal Brownfields 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
US CDL ---- National Clandestine Laboratory Register
PFAS ---- PFAS Contamination Site Location Listing

Local Lists of Registered Storage 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

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
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
ECHO ---- Enforcement & Compliance History Information
UXO ---- Unexploded Ordnance Sites
DOCKET HWC ---- Hazardous Waste Compliance Docket Listing
FUELS PROGRAM ---- EPA Fuels Program Registered Listing
CA BOND EXP. PLAN ---- Bond Expenditure Plan
DRYCLEANERS ---- Cleaner Facilities
EMI ---- Emissions Inventory Data
ENF ---- Enforcement Action Listing
Financial Assurance ---- Financial Assurance Information Listing
HAZNET ---- Facility and Manifest Data
ICE ---- ICE
HWP ---- EnviroStor Permitted Facilities Listing
HWT ---- Registered Hazardous Waste Transporter Database
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
UIC ---- UIC Listing
UIC GEO ---- UIC GEO (GEOTRACKER)
WASTEWATER PITS ---- Oil Wastewater Pits Listing
WDS ---- Waste Discharge System
MILITARY PRIV SITES ---- MILITARY PRIV SITES (GEOTRACKER)
PROJECT ---- PROJECT (GEOTRACKER)
WDR ---- Waste Discharge Requirements Listing
CIWQS ---- California Integrated Water Quality System
CERS ---- CERS
WIP ---- Well Investigation Program Case List
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)

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

EXECUTIVE SUMMARY

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

State and tribal leaking storage tank lists

LUST: 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.

A review of the LUST list, as provided by EDR, has revealed that there is 1 LUST site within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SIERRA SUPER STOP #2	***2968 HWY 49***	***WSW 0 - 1/8 (0.065 mi.)***	***A4***	***11***

Database: LUST REG 5, Date of Government Version: 07/01/2008
Database: LUST, Date of Government Version: 12/10/2018
Status: Open - Remediation
Status: Preliminary site assessment underway
Global Id: T0601700082

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, has revealed that there is 1 UST site within approximately 0.125 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SIERRA SUPERSTOP #2	2968 HWY 49	WSW 0 - 1/8 (0.065 mi.)	A3	11

Database: UST, Date of Government Version: 12/10/2018

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

CERS HAZ 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.

A review of the CERS HAZ WASTE list, as provided by EDR, and dated 04/09/2019 has revealed that there are 2 CERS HAZ WASTE sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SIERRA SUPER STOP #2	***2968 HWY 49***	***WSW 0 - 1/8 (0.065 mi.)***	***A4***	***11***
THE GARAGE AUTOMOTIV	***3006 SUITE G HWY 49***	***S 0 - 1/8 (0.092 mi.)***	***B7***	***50***

Local Lists of Registered Storage Tanks

SWEEPS UST: 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.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 3 SWEEPS UST sites within approximately 0.125 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SIERRA SUPER STOP #2 Status: A Tank Status: A Comp Number: 72	***2968 HWY 49***	***WSW 0 - 1/8 (0.065 mi.)***	***A4***	***11***
NORTHSIDE MIDDLE-ELE Comp Number: 43076	***3000 STATE HIGHWAY 4***	***SSW 0 - 1/8 (0.088 mi.)***	***B5***	***49***
EL DORADO CO FIRE PR Comp Number: 356	7200 ST. FLORIN RD	WNW 0 - 1/8 (0.114 mi.)	8	61

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 2 HIST UST sites within approximately 0.125 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
NORTHSIDE MIDDLE-ELE Facility Id: 00000043076	***3000 STATE HIGHWAY 4***	***SSW 0 - 1/8 (0.088 mi.)***	***B5***	***49***
NORTHSIDE SCHOOL	***3000 HIGHWAY 49***	***SSW 0 - 1/8 (0.088 mi.)***	***B6***	***49***

EXECUTIVE SUMMARY

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.

A review of the CERS TANKS list, as provided by EDR, and dated 04/09/2019 has revealed that there is 1 CERS TANKS site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SIERRA SUPER STOP #2	***2968 HWY 49***	***WSW 0 - 1/8 (0.065 mi.)***	***A4***	***11***

Other Ascertainable Records

Cortese: 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).

A review of the Cortese list, as provided by EDR, and dated 03/25/2019 has revealed that there is 1 Cortese site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SIERRA SUPER STOP #2	***2968 HWY 49***	***WSW 0 - 1/8 (0.065 mi.)***	***A4***	***11***
Cleanup Status: OPEN - REMEDIATION				

CUPA Listings: 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.

A review of the CUPA Listings list, as provided by EDR, has revealed that there is 1 CUPA Listings site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
VERIZON WIRELESS COO	***1050 NORTHSIDE DR***	***E 0 - 1/8 (0.042 mi.)***	***1***	***8***
Database: CUPA EL DORADO, Date of Government Version: 02/27/2019				
Status: Active, billable				

HIST CORTESE: 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.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there is 1 HIST CORTESE site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SIERRA SUPER STOP #2	***2968 HWY 49***	***WSW 0 - 1/8 (0.065 mi.)***	***A4***	***11***
Reg Id: 090101				

EXECUTIVE SUMMARY

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LUST: 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.

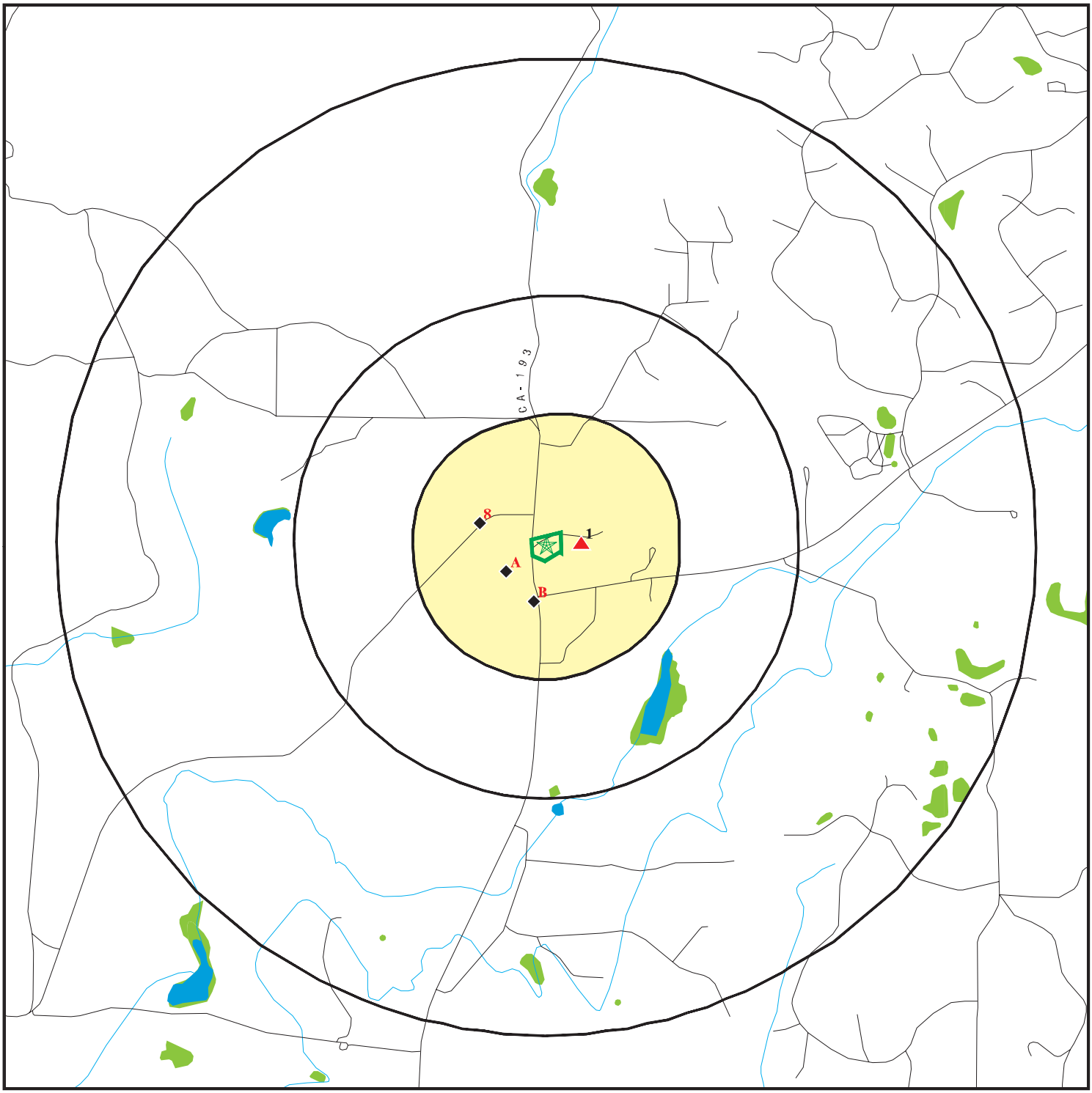
A review of the RGA LUST list, as provided by EDR, has revealed that there is 1 RGA LUST site within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SIERRA SUPER STOP #2	2968 HWY 49	WSW 0 - 1/8 (0.065 mi.)	A2	10

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 5654784.2S



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

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

Areas of Concern

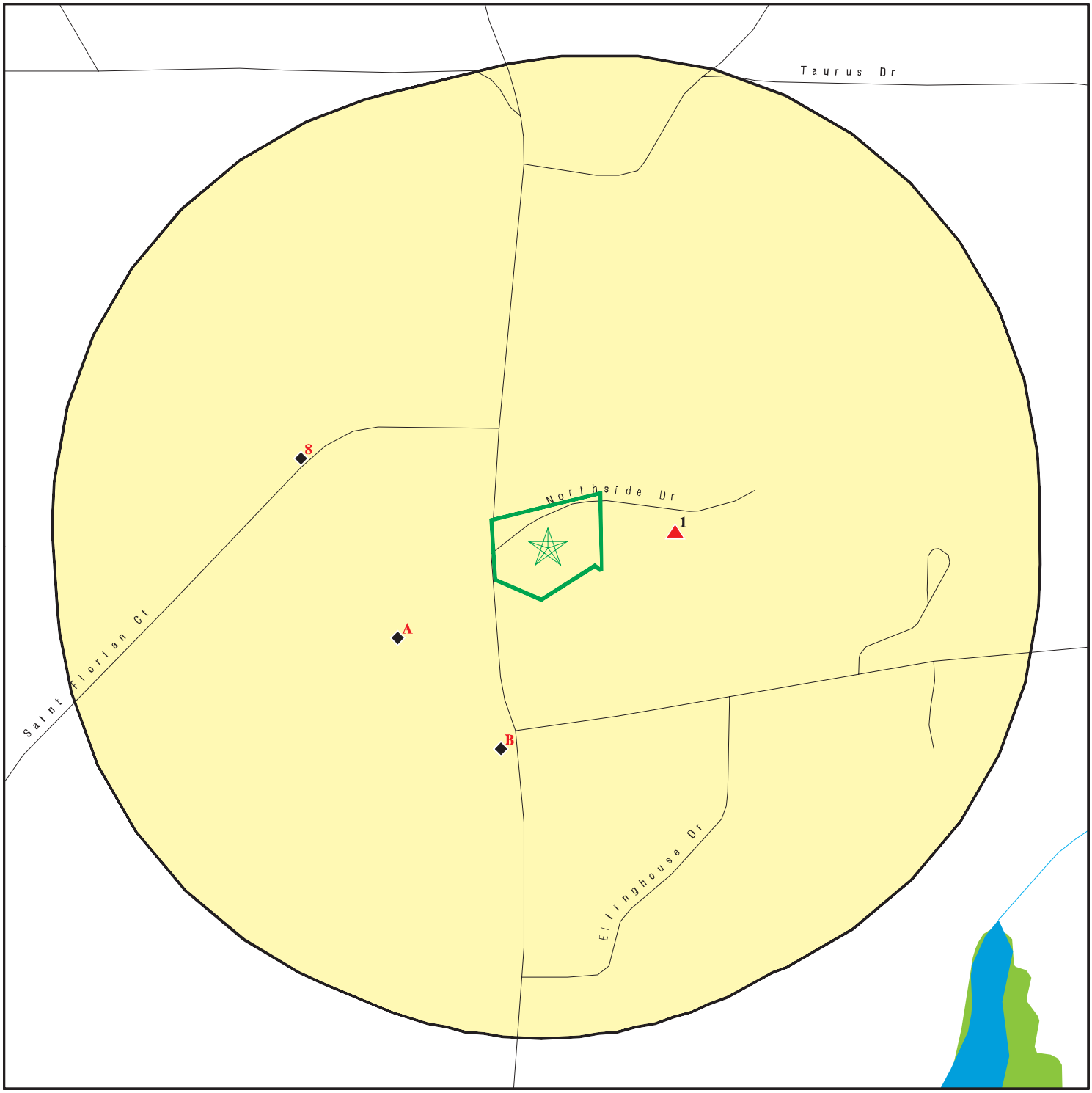
N

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:	APN 071-500-037	CLIENT:	Bole and Associates
ADDRESS:	1020 Northside Drive Cool CA 95614	CONTACT:	David Bole
		INQUIRY #:	5654784.2s
LAT/LONG:	38.888497 / 121.015534	DATE:	May 16, 2019 2:01 pm

Copyright © 2019 EDR, Inc. © 2015 TomTom Rel. 2015.

DETAIL MAP - 5654784.2S



- 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
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- 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:	APN 071-500-037	CLIENT:	Bole and Associates
ADDRESS:	1020 Northside Drive Cool CA 95614	CONTACT:	David Bole
		INQUIRY #:	5654784.2s
LAT/LONG:	38.888497 / 121.015534	DATE:	May 16, 2019 2:03 pm

Copyright © 2019 EDR, Inc. © 2015 TomTom Rel. 2015.

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								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	1.000		0	0	0	0	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	1.000		0	0	0	0	NR	0
Federal RCRA generators list								
RCRA-LQG	0.125		0	NR	NR	NR	NR	0
RCRA-SQG	0.125		0	NR	NR	NR	NR	0
RCRA-CESQG	0.125		0	NR	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 CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	1.000		1	0	0	0	NR	1

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
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.125		1	NR	NR	NR	NR	1
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
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
State and tribal Brownfields 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	TP		NR	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	TP		NR	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	TP		NR	NR	NR	NR	NR	0
CERS HAZ WASTE	0.250		2	0	NR	NR	NR	2
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.125		3	NR	NR	NR	NR	3
HIST UST	0.125		2	NR	NR	NR	NR	2
CA FID UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		1	0	NR	NR	NR	1
Local Land Records								
LIENS	TP		NR	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	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
CHMIRS	TP		NR	NR	NR	NR	NR	0
LDS	TP		NR	NR	NR	NR	NR	0
MCS	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	TP		NR	NR	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	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	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	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	TP		NR	NR	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		1	0	0	NR	NR	1
CUPA Listings	0.250		1	0	NR	NR	NR	1
DRYCLEANERS	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
EMI	TP		NR	NR	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
HAZNET	TP		NR	NR	NR	NR	NR	0
ICE	TP		NR	NR	NR	NR	NR	0
HIST CORTESE	0.500		1	0	0	NR	NR	1
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	TP		NR	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
PEST LIC	TP		NR	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
UIC GEO	TP		NR	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
MILITARY PRIV SITES	TP		NR	NR	NR	NR	NR	0
PROJECT	TP		NR	NR	NR	NR	NR	0
WDR	TP		NR	NR	NR	NR	NR	0
CIWQS	TP		NR	NR	NR	NR	NR	0
CERS	TP		NR	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
NON-CASE INFO	TP		NR	NR	NR	NR	NR	0
OTHER OIL GAS	TP		NR	NR	NR	NR	NR	0
PROD WATER PONDS	TP		NR	NR	NR	NR	NR	0
SAMPLING POINT	TP		NR	NR	NR	NR	NR	0
WELL STIM PROJ	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.250		0	0	NR	NR	NR	0
EDR Hist Cleaner	0.250		0	0	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.500		0	0	0	NR	NR	0
RGA LUST	1.000		1	0	0	0	NR	1
- Totals --		0	14	0	0	0	0	14

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
East
< 1/8
0.042 mi.
223 ft.

VERIZON WIRELESS COOL
1050 NORTHSIDE DR
COOL, CA 95614

CUPA Listings **S110984220**
CERS **N/A**

Relative:
Higher

Actual:
1558 ft.

CUPA EL DORADO:

PE:	BUSINESS PLANS/SMALL BUSINESS
Status:	Active, billable
Latitude:	38.8884
Longitude:	-121.0142
Name:	Verizon Wireless
Email:	Not reported
Address2:	Not reported
Permit:	PT0010186
Phone:	8666942415
Second Phone:	8666942415
APN:	Not reported
RP Name:	Environmental Compliance
RP Care of:	Not reported
RP Phone:	8666942415
GIS Elevation:	Not reported
CERSID:	10142843
Business Type:	OTHER
Current Inspection Date:	10/11/2020
Last Inspection Date:	10/14/2017

CERS TANKS:

Site ID:	166812
CERS ID:	10142843
Site Name:	VERIZON WIRELESS COOL
CERS Description:	Chemical Storage Facilities

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-14-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	El Dorado County Environmental Management
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-11-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	El Dorado County Environmental Management
Eval Program:	HMRRP
Eval Source:	CERS

Coordinates:

Site ID:	166812
Facility Name:	Verizon Wireless Cool
Env Int Type Code:	HMBP
Program ID:	10142843
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.

VERIZON WIRELESS COOL (Continued) **S110984220**

Latitude: 38.888400
Longitude: -121.014200

Affiliation:
Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 295 Parkshore Drive
Affiliation City: Folsom
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 95630
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: Verizon Wireless
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (866) 694-2415

Affiliation Type Desc: Document Preparer
Entity Name: Steve Skanderson
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: armand delgado
Entity Title: environmental compliance mgr
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Verizon Wireless
Entity Title: Not reported
Affiliation Address: 295 Parkshore Drive
Affiliation City: Folsom
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 95630
Affiliation Phone: (866) 694-2415

Affiliation Type Desc: Parent Corporation
Entity Name: Verizon Wireless [Northern California]
Entity Title: Not reported

VERIZON WIRELESS COOL (Continued) **S110984220**

Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Environmental Compliance
Entity Title:	Not reported
Affiliation Address:	295 Parkshore Drive
Affiliation City:	Folsom
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95630
Affiliation Phone:	Not reported
Affiliation Type Desc:	CUPA District
Entity Name:	El Dorado County Environmental Management
Entity Title:	Not reported
Affiliation Address:	2850 Fairlane Court, Bldg C
Affiliation City:	Placerville
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95667-4100
Affiliation Phone:	(530) 621-5300

A2 **SIERRA SUPER STOP #2** **RGA LUST** **S114691124**
WSW **2968 HWY 49** **N/A**
< 1/8 **COOL, CA**
0.065 mi.
341 ft. **Site 1 of 3 in cluster A**

Relative: RGA LUST:
Lower

Actual:
1515 ft.

2012	SIERRA SUPER STOP #2	2968 HWY 49
2011	SIERRA SUPER STOP #2	2968 HWY 49
2010	SIERRA SUPER STOP #2	2968 HWY 49
2009	SIERRA SUPER STOP #2	2968 HWY 49
2008	SIERRA SUPER STOP #2	2968 HWY 49
2007	SIERRA SUPER STOP #2	2968 HWY 49
2006	SIERRA SUPER STOP #2	2968 HWY 49
2005	SIERRA SUPER STOP #2	2968 HWY 49
2003	SIERRA SUPER STOP #2	2968 HWY 49
2002	SIERRA SUPER STOP #2	2968 HWY 49
2001	SIERRA SUPER STOP #2	2968 HWY 49
2000	SIERRA SUPER STOP #2	2968 HWY 49

A3 **SIERRA SUPERSTOP #2** **UST** **U003832318**
WSW **2968 HWY 49** **N/A**
< 1/8 **COOL, CA 95614**
0.065 mi.
341 ft. **Site 2 of 3 in cluster A**

Relative:
Lower

Actual:
1515 ft.

UST:
Facility ID: Not reported
Permitting Agency: El Dorado County Environmental Management
Latitude: 38.8873
Longitude: -121.0164

A4 **SIERRA SUPER STOP #2** **LUST** **S105023387**
WSW **2968 HWY 49** **CERS HAZ WASTE** **N/A**
< 1/8 **COOL, CA 95614** **SWEEPS UST**
0.065 mi. **CERS TANKS**
341 ft. **Site 3 of 3 in cluster A** **Cortese**
HIST CORTESE

Relative:
Lower

CERS

Actual:
1515 ft.

LUST:
Lead Agency: CENTRAL VALLEY RWQCB (REGION 5S)
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0601700082
Global Id: T0601700082
Latitude: 38.8868573550269
Longitude: -121.016635894775
Status: Open - Remediation
Status Date: 09/30/2014
Case Worker: KEJ
RB Case Number: 090101
Local Agency: EL DORADO COUNTY
File Location: Local Agency
Local Case Number: Not reported
Potential Media Affect: Aquifer used for drinking water supply, Other Groundwater (uses other than drinking water), Soil, Soil Vapor, Under Investigation, Well used for drinking water supply
Potential Contaminants of Concern: Gasoline
Site History: In May 2005, petroleum impacted soils were noted beneath spill buckets of UST during upgrade activities. In October 2006 soil samples collected near dispensers indicated petroleum impacted soils. In September 2009 four groundwater monitoring wellls were installed and groundwater samples indicated a maximum TPHg, benzene and MTBE concentrations of 19,800 ug/l, 91.1 ug/l, and 4,730 ug/l, respectively. A maximum TBA concentration of 4,820 ug/l was also found. Additional site assessment and interim remediation effort also occurred in late 2010. Transfer case to Regional Board on 6/30/2014. RAL

LUST:
Global Id: T0601700082
Contact Type: Regional Board Caseworker
Contact Name: KYLE JOHNSON
Organization Name: CENTRAL VALLEY RWQCB (REGION 5S)
Address: 11020 Sun Center Drive, Suite 200
City: SACRAMENTO
Email: kyle.johnson@waterboards.ca.gov
Phone Number: 9164643291

SIERRA SUPER STOP #2 (Continued) **S105023387**

LUST:

Global Id:	T0601700082
Action Type:	ENFORCEMENT
Date:	10/12/2015
Action:	Meeting
Global Id:	T0601700082
Action Type:	Other
Date:	05/17/2005
Action:	Leak Reported
Global Id:	T0601700082
Action Type:	ENFORCEMENT
Date:	10/01/2008
Action:	Letter - Notice
Global Id:	T0601700082
Action Type:	ENFORCEMENT
Date:	03/25/2016
Action:	Staff Letter
Global Id:	T0601700082
Action Type:	ENFORCEMENT
Date:	10/07/2016
Action:	Staff Letter
Global Id:	T0601700082
Action Type:	RESPONSE
Date:	09/30/2006
Action:	Preliminary Site Assessment Workplan
Global Id:	T0601700082
Action Type:	RESPONSE
Date:	11/30/2006
Action:	Preliminary Site Assessment Report
Global Id:	T0601700082
Action Type:	RESPONSE
Date:	10/30/2014
Action:	CAP/RAP - Feasibility Study Report - Regulator Responded
Global Id:	T0601700082
Action Type:	RESPONSE
Date:	09/30/2014
Action:	Soil and Water Investigation Workplan - Regulator Responded
Global Id:	T0601700082
Action Type:	RESPONSE
Date:	01/15/2015
Action:	Soil and Water Investigation Workplan - Addendum - Regulator Responded
Global Id:	T0601700082
Action Type:	RESPONSE
Date:	10/30/2014
Action:	CAP/RAP - Feasibility Study Report - Regulator Responded
Global Id:	T0601700082

SIERRA SUPER STOP #2 (Continued) **S105023387**

Action Type: RESPONSE
Date: 05/23/2017
Action: Other Workplan - Regulator Responded

Global Id: T0601700082
Action Type: ENFORCEMENT
Date: 03/23/2010
Action: Staff Letter

Global Id: T0601700082
Action Type: ENFORCEMENT
Date: 02/18/2011
Action: Staff Letter

Global Id: T0601700082
Action Type: ENFORCEMENT
Date: 04/05/2011
Action: Staff Letter

Global Id: T0601700082
Action Type: ENFORCEMENT
Date: 09/21/2010
Action: Staff Letter

Global Id: T0601700082
Action Type: ENFORCEMENT
Date: 08/18/2011
Action: Technical Correspondence / Assistance / Other

Global Id: T0601700082
Action Type: ENFORCEMENT
Date: 03/01/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0601700082
Action Type: ENFORCEMENT
Date: 07/06/2012
Action: Staff Letter

Global Id: T0601700082
Action Type: ENFORCEMENT
Date: 07/05/2017
Action: Staff Letter

Global Id: T0601700082
Action Type: ENFORCEMENT
Date: 07/28/2017
Action: Email Correspondence

Global Id: T0601700082
Action Type: RESPONSE
Date: 10/31/2014
Action: Monitoring Report - Quarterly

Global Id: T0601700082
Action Type: ENFORCEMENT
Date: 06/30/2014

SIERRA SUPER STOP #2 (Continued) **S105023387**

Action:	Referral to Regional Board
Global Id:	T0601700082
Action Type:	ENFORCEMENT
Date:	02/03/2015
Action:	Staff Letter
Global Id:	T0601700082
Action Type:	RESPONSE
Date:	01/30/2015
Action:	Monitoring Report - Quarterly
Global Id:	T0601700082
Action Type:	RESPONSE
Date:	05/14/2015
Action:	Clean Up Fund - 5-Year Review Summary
Global Id:	T0601700082
Action Type:	REMEDIATION
Date:	12/04/2010
Action:	In Situ Physical/Chemical Treatment (other than SVE)
Global Id:	T0601700082
Action Type:	Other
Date:	05/17/2005
Action:	Leak Began
Global Id:	T0601700082
Action Type:	RESPONSE
Date:	07/30/2015
Action:	Monitoring Report - Semi-Annually
Global Id:	T0601700082
Action Type:	ENFORCEMENT
Date:	08/11/2005
Action:	Verbal Enforcement
Global Id:	T0601700082
Action Type:	RESPONSE
Date:	07/30/2015
Action:	Soil and Water Investigation Report
Global Id:	T0601700082
Action Type:	ENFORCEMENT
Date:	10/04/2007
Action:	Verbal Communication
Global Id:	T0601700082
Action Type:	ENFORCEMENT
Date:	08/05/2014
Action:	Staff Letter
Global Id:	T0601700082
Action Type:	ENFORCEMENT
Date:	05/09/2014
Action:	Referral to Regional Board

SIERRA SUPER STOP #2 (Continued) **S105023387**

Global Id: T0601700082
Action Type: Other
Date: 05/17/2005
Action: Leak Discovery

Global Id: T0601700082
Action Type: Other
Date: 05/17/2005
Action: Leak Stopped

Global Id: T0601700082
Action Type: ENFORCEMENT
Date: 09/03/1998
Action: Referral to Local Agency

LUST:
Global Id: T0601700082
Status: Completed - Case Closed
Status Date: 10/01/1998

Global Id: T0601700082
Status: Open - Assessment & Interim Remedial Action
Status Date: 11/08/2006

Global Id: T0601700082
Status: Open - Case Begin Date
Status Date: 09/03/1998

Global Id: T0601700082
Status: Open - Remediation
Status Date: 07/06/2010

Global Id: T0601700082
Status: Open - Remediation
Status Date: 07/15/2010

Global Id: T0601700082
Status: Open - Remediation
Status Date: 07/15/2010

Global Id: T0601700082
Status: Open - Remediation
Status Date: 09/30/2014

Global Id: T0601700082
Status: Open - Reopen Case
Status Date: 06/10/2005

Global Id: T0601700082
Status: Open - Site Assessment
Status Date: 09/03/1998

Global Id: T0601700082
Status: Open - Site Assessment
Status Date: 09/15/2006

Global Id: T0601700082

SIERRA SUPER STOP #2 (Continued) **S105023387**

Status: Open - Site Assessment
Status Date: 09/25/2006

Global Id: T0601700082
Status: Open - Site Assessment
Status Date: 11/08/2006

Global Id: T0601700082
Status: Open - Site Assessment
Status Date: 09/30/2014

LUST REG 5:
Region: 5
Status: Preliminary site assessment underway
Case Number: 090101
Case Type: Soil only
Substance: GASOLINE
Staff Initials: PGM
Lead Agency: Local
Program: LUST
MTBE Code: N/A

CERS HAZ WASTE:
Site ID: 67679
CERS ID: 10202632
CERS Description: Hazardous Waste Generator

Violations:
Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Violation Date: 09-19-2016
Citation: HSC 6.7 25284.2 - California Health and Safety Code, Chapter 6.7, Section(s) 25284.2
Violation Description: Failure to test the spill bucket annually.
Violation Notes: Returned to compliance on 09/27/2016. Diesel spill bucket failed during annual testing. Spill bucket shall be capable of containing hazardous substance and preventing a release to the environment. Replace and retest diesel spill bucket by the comply by date. Because the spill bucket is direct buried a minor permit will need to be obtained prior to replacement.
Violation Division: El Dorado County Environmental Management
Violation Program: UST
Violation Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Violation Date: 09-19-2017
Citation: 22 CCR 15 66265.192(k) - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.192(k)
Violation Description: Failure to include all required information in the tank system assessment.
Violation Notes: Returned to compliance on 11/09/2017. Drums that were observed storing hazardous waste had illegible labels on the containers. Containers storing hazardous waste shall be labeled with the following: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting

SIERRA SUPER STOP #2 (Continued) **S105023387**

	accumulation date. Submit photo by the comply by date showing drums properly labled.
Violation Division:	El Dorado County Environmental Management
Violation Program:	HW
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2016
Citation:	23 CCR 16 2641(j) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2641(j)
Violation Description:	Failure of the leak detection equipment to be installed, calibrated, operated, and/or maintained properly.
Violation Notes:	Returned to compliance on 09/19/2016. Diesel mechanical line leak detector failed during initial testing. Leak detector was adjusted by the service technician and retested with passing results.
Violation Division:	El Dorado County Environmental Management
Violation Program:	UST
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2017
Citation:	23 CCR 16 2715(f) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(f)
Violation Description:	Failure to have at least one employee present during operating hours that has been trained in the proper operation and maintenance of the UST system by a designated operator (DO).
Violation Notes:	Returned to compliance on 11/09/2017. During the annual monitoring certification the two employees on site had not received designated operator (DO) training. During the hours of operation at least one employee shall have received training in the proper operation and maintenance of the UST system from the DO. Submit documentation showing all employees have received DO training by the comply by date.
Violation Division:	El Dorado County Environmental Management
Violation Program:	UST
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2017
Citation:	23 CCR 16 2715(c) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(c)
Violation Description:	Failure to comply with one or more of the following designated operator (DO) monthly inspection requirements: Be performed by an ICC certified DO. Inspect monthly alarm history report, check that alarms are documented and responded to appropriately, and attach a copy. Inspect for the presence of liquid/debris in spill containers. Inspect for the presence of liquid/debris in under dispenser containment (UDC) and ensure that the monitoring equipment is positioned correctly. Inspect for liquid or debris in containment sumps where an alarm occurred with no service visit. Check that all testing and maintenance has been completed and documented. Verify that all facility employees have been properly trained.
Violation Notes:	Returned to compliance on 11/09/2017. Designated operator (DO) reports were not available for the following months: May 2017, June 2017, July 2017, and August 2017. DO reports shall be on site and made available

SIERRA SUPER STOP #2 (Continued) **S105023387**

	for the previous 12 months. Submit DO reports for those listed missing months by the comply by date.
Violation Division:	El Dorado County Environmental Management
Violation Program:	UST
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-23-2015
Citation:	23 CCR 16 2715(a) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(a)
Violation Description:	Failure to submit statement of UST compliance and/or Designated Operator certification.
Violation Notes:	Returned to compliance on 10/28/2015. The designated operator for this facility has changed. Update the designated operator for this facility in the California Environmental Reporting System (CERS) by the comply by date.
Violation Division:	El Dorado County Environmental Management
Violation Program:	UST
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2016
Citation:	23 CCR 16 2635(a)(2)(A) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2635(a)(2)(A)
Violation Description:	Failure to comply with one or more of the following requirements for the cathodic protection system: Have corrosion protection equipment turned on and functioning properly. Inspect the impressed-current system every 60 calendar days. Inspect the impressed-current system within six months of installation and at least every three years thereafter. Test sacrificial anodes once every three years in accordance with the manufacturer?s instructions.
Violation Notes:	Returned to compliance on 10/24/2016. During the inspection the cathodic protection system did not appear to be functional as the volts and amps read zero. Submit documentation by the comply by date showing the system has been repaired and is functioning as designed.
Violation Division:	El Dorado County Environmental Management
Violation Program:	UST
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2016
Citation:	23 CCR 16 2712(b) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)
Violation Description:	Failure to comply with one or more of the following corrosion protection record retention requirements: Maintain records of cathodic protection systems testing within six months of installation and at least every three years thereafter. Maintain records for the 60 calendar day inspection of the impressed-current system. Maintain records for sacrificial anodes testing every three years. Have written monitoring and maintenance records on-site or off-site at a readily available location if approved by the CUPA.
Violation Notes:	Returned to compliance on 10/24/2016. Observed that the cathodic protection system was not recorded for the months of July and August 2016 and the records show May and June of 2016 was completed on

SIERRA SUPER STOP #2 (Continued) **S105023387**

4/01/2016. Cathodic protection system shall be recorded every 60 days and records shall be maintained on site for 3 years. Submit a photo of the September and October cathodic protection records by the comply by date.

Violation Division: El Dorado County Environmental Management
Violation Program: UST
Violation Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Violation Date: 09-19-2017
Citation: 40 CFR 1 265.201(b)(3) - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.201(b)(3)
Violation Description: Failure to operate uncovered tanks to ensure at least 60 centimeters (2 feet) of freeboard, unless the tank is equipped with a containment structure (e.g., dike or trench), a drainage control system, or a diversion structure (e.g., standby tank) with a capacity that equals or exceeds the volume of the top 60 centimeters (2 feet) of the tank.
Violation Notes: Returned to compliance on 11/09/2017. Observed four drums of hazardous waste in garbage storage area with no accumulation date marked on drum labels. Hazardous waste shall be disposed of within 90 days of accumulation of 100kg or 27 gallons. Submit documentation showing these drums have been properly disposed of by the comply by date.
Violation Division: El Dorado County Environmental Management
Violation Program: HW
Violation Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Violation Date: 09-23-2015
Citation: 23 CCR 16 2715(f) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(f)
Violation Description: Failure to comply with one or more of the following: provide training to facility employee(s) responsible for proper operation and maintenance every 12 months and/or train new employee(s) who are responsible for proper operation and maintenance within 30-days of hire and/or to have at least one employee present during operating hours that has been trained in the proper operation and maintenance of the UST system.
Violation Notes: Returned to compliance on 10/28/2015. During the inspection it was observed that employees had not received annual designated operator (DO) training. Designated operator training shall be provided to employees every 12 months and within 30 days of hire for those employees responsible for the proper operation and maintenance of the UST system. The three employees that were onsite during the inspection received DO training. Submit documentation by the comply by date showing all employees have received current DO training.
Violation Division: El Dorado County Environmental Management
Violation Program: UST
Violation Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Violation Date: 09-19-2017
Citation: 23 CCR 16 2665 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2665
Violation Description: Failure to comply with one or more of the following: Failure to

SIERRA SUPER STOP #2 (Continued) **S105023387**

	install or maintain a liquid-tight spill bucket. Have a minimum capacity of five gallons. Have a functional drain valve or other method for the removal of liquid from the spill bucket/spill container. Be resistant to galvanic corrosion.
Violation Notes:	Returned to compliance on 09/19/2017. Observed product in the diesel spill bucket. Spill buckets shall be kept empty at all times. Product was removed from the spill bucket during the annual testing.
Violation Division:	El Dorado County Environmental Management
Violation Program:	UST
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2017
Citation:	23 CCR 16 2662(c)(1)(B) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2662(c)(1)(B)
Violation Description:	Failure to install corrosion protection for USTs and/or failure of the field-installed cathodic protection system to meet the consensus standards.
Violation Notes:	Returned to compliance on 01/04/2018. Cathodic protection system does not appear to be in proper working order. The hour on the clock 4912.1 was the same hour that was last documented during the last 60 day inspection. System shall be evaluated by a certified cathodic protection tester. Submit documentation by the comply by date showing the cathodic protection system is operating as designed.
Violation Division:	El Dorado County Environmental Management
Violation Program:	UST
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2017
Citation:	HSC 6.5 25250.19(c) - California Health and Safety Code, Chapter 6.5, Section(s) 25250.19(c)
Violation Description:	Failure to record in an operating log and retain for three years the following information for each shipment of recycled or exempted oil: 1) The name and address of the used oil recycling facility or generator claiming the oil meets the requirements of HSC 6.5 25250.1. 2) The name and address of the facility receiving the shipment. 3) The quantity of oil delivered. 4) The date of shipment or delivery. 5) A cross-reference to the records and documentation required under HSC 6.5 25250.1.
Violation Notes:	Returned to compliance on 11/09/2017. No documentation of hazardous waste manifests were available at the time of inspection. Hazardous waste manifest shall be kept on site for at least three years. Submit documentation of the last two hazardous waste manifest by the comply by date.
Violation Division:	El Dorado County Environmental Management
Violation Program:	HW
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2016
Citation:	HSC 6.7 25290.1(c)(3), 25290.2(c)(3) - California Health and Safety Code, Chapter 6.7, Section(s) 25290.1(c)(3), 25290.2(c)(3)
Violation Description:	Failure to keep water out of the secondary containment of UST systems

SIERRA SUPER STOP #2 (Continued) **S105023387**

installed on or after July 1, 2003 and before July 1, 2004, or on or after July 1, 2004.

Violation Notes: Returned to compliance on 09/19/2016. Observed liquid in the 87 STP sump. Liquid shall be removed in order to detect a leak or release at the earliest possible opportunity. Liquid was removed by the service technician during the annual testing.
Violation Division: El Dorado County Environmental Management
Violation Program: UST
Violation Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Violation Date: 09-19-2017
Citation: 22 CCR 15 66265.192(m) - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.192(m)
Violation Description: Failure to obtain CUPA approval prior to the replacement of identical or functionally equivalent tank system parts or components.
Violation Notes: Returned to compliance on 11/09/2017. Observed universal hazardous waste (lamps/bulbs) without labeling on bulbs. Bulbs shall be properly managed and disposed of within one year of the accumulation start date. Submit documentation by the comply by date showing these Universal hazardous waste bulbs are being managed and labeled appropriately.
Violation Division: El Dorado County Environmental Management
Violation Program: HW
Violation Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Violation Date: 09-23-2015
Citation: 23 CCR 16 2635 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2635
Violation Description: Failure to inspect the impressed-current system every 60 calendar days and/or failure to have corrosion protection equipment turned on and functioning properly and/or failure to inspect the impressed-current system within six months of installation and at least every three years thereafter and/or failure to test sacrificial anodes once every three years in accordance with the manufacturer?s instructions.
Violation Notes: Returned to compliance on 10/28/2015. It was observed that the cathodic protection system is not being inspected every 60 days as required. The January and February period was inspected on 3/2/2015 and the March and April period was inspected on 5/6/2015. Perform inspection of the cathodic protection system at least once every 60 days and maintain records of this inspection.
Violation Division: El Dorado County Environmental Management
Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-19-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: HW
Eval Source: CERS

SIERRA SUPER STOP #2 (Continued) **S105023387**

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-19-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-13-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-23-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-09-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-09-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-13-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-13-2013
Violations Found: No

SIERRA SUPER STOP #2 (Continued) **S105023387**

Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-19-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-19-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: HMRRP
Eval Source: CERS

Enforcement Action:
Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Site Address: 2968 HWY 49
Site City: COOL
Site Zip: 95614
Enf Action Date: 09-19-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: El Dorado County Environmental Management
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Site Address: 2968 HWY 49
Site City: COOL
Site Zip: 95614
Enf Action Date: 09-19-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: El Dorado County Environmental Management
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Site Address: 2968 HWY 49
Site City: COOL
Site Zip: 95614
Enf Action Date: 09-19-2017

SIERRA SUPER STOP #2 (Continued) **S105023387**

Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: El Dorado County Environmental Management
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Site Address: 2968 HWY 49
Site City: COOL
Site Zip: 95614
Enf Action Date: 09-23-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: El Dorado County Environmental Management
Enf Action Program: UST
Enf Action Source: CERS

Affiliation:
Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 1020 WINDING CREEK RD #100
Affiliation City: Roseville
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 95678
Affiliation Phone: Not reported

Affiliation Type Desc: Property Owner
Entity Name: TOMS SIERRA COMPANY, INC.
Entity Title: Not reported
Affiliation Address: 1020 WINDING CREEK RD #100
Affiliation City: ROSEVILLE
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 95678
Affiliation Phone: (916) 218-1600

Affiliation Type Desc: UST Tank Operator
Entity Name: Sierra Energy
Entity Title: Not reported
Affiliation Address: 1020 Winding Creek Rd. Ste 100
Affiliation City: Roseville
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 95746
Affiliation Phone: (916) 218-1600

Affiliation Type Desc: UST Property Owner Name
Entity Name: Dino and Mary Masouris
Entity Title: Not reported
Affiliation Address: 2968 Hwy 49
Affiliation City: Cool
Affiliation State: CA

SIERRA SUPER STOP #2 (Continued) **S105023387**

Affiliation Country:	United States
Affiliation Zip:	95614
Affiliation Phone:	(916) 984-3481
Affiliation Type Desc:	CUPA District
Entity Name:	El Dorado County Environmental Management
Entity Title:	Not reported
Affiliation Address:	2850 Fairlane Court, Bldg C
Affiliation City:	Placerville
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95667-4100
Affiliation Phone:	(530) 621-5300
Affiliation Type Desc:	Document Preparer
Entity Name:	Bill Jackson
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Bill Jackson
Entity Title:	Not reported
Affiliation Address:	1020 Winding Creek Rd. Ste 100
Affiliation City:	Roseville
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95678
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Bill Jackson
Entity Title:	Technology/Facilities Director
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Sierra Superstop #2
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(530) 888-7080
Affiliation Type Desc:	UST Tank Owner
Entity Name:	Toms Sierra Co Inc
Entity Title:	Not reported

SIERRA SUPER STOP #2 (Continued) **S105023387**

Affiliation Address: 1020 Winding Creek Rd
Affiliation City: Roseville
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 95678
Affiliation Phone: (916) 218-1600

Affiliation Type Desc: Legal Owner
Entity Name: TOMS SIERRA COMPANY, INC.
Entity Title: Not reported
Affiliation Address: 1020 WINDING CREEK RD #100
Affiliation City: ROSEVILLE
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 95678
Affiliation Phone: (916) 218-1600

Affiliation Type Desc: Parent Corporation
Entity Name: Sierra Superstop #2
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: UST Permit Applicant
Entity Name: Bob Buljan
Entity Title: Director of Operations
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (916) 218-1635

SWEEPS UST:
Status: Active
Comp Number: 72
Number: 9
Board Of Equalization: Not reported
Referral Date: 07-30-91
Action Date: 07-30-91
Created Date: 07-30-91
Owner Tank Id: 1
SWRCB Tank Id: 09-000-000072-000001
Tank Status: A
Capacity: 8000
Active Date: 07-30-91
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: 3

Status: Active

SIERRA SUPER STOP #2 (Continued) **S105023387**

Comp Number: 72
Number: 9
Board Of Equalization: Not reported
Referral Date: 07-30-91
Action Date: 07-30-91
Created Date: 07-30-91
Owner Tank Id: 2
SWRCB Tank Id: 09-000-000072-000002
Tank Status: A
Capacity: 8000
Active Date: 07-30-91
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 72
Number: 9
Board Of Equalization: Not reported
Referral Date: 07-30-91
Action Date: 07-30-91
Created Date: 07-30-91
Owner Tank Id: 3
SWRCB Tank Id: 09-000-000072-000003
Tank Status: A
Capacity: 10000
Active Date: 07-30-91
Tank Use: M.V. FUEL
STG: P
Content: DIESEL
Number Of Tanks: Not reported

CERS TANKS:
Facility Name: SIERRA SUPERSTOP #2
Site ID: 67679
CERS ID: 10202632
CERS Description: Underground Storage Tank

Violations:
Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Violation Date: 09-19-2016
Citation: HSC 6.7 25284.2 - California Health and Safety Code, Chapter 6.7, Section(s) 25284.2
Violation Description: Failure to test the spill bucket annually.
Violation Notes: Returned to compliance on 09/27/2016. Diesel spill bucket failed during annual testing. Spill bucket shall be capable of containing hazardous substance and preventing a release to the environment. Replace and retest diesel spill bucket by the comply by date. Because the spill bucket is direct buried a minor permit will need to be obtained prior to replacement.
Violation Division: El Dorado County Environmental Management
Violation Program: UST
Violation Source: CERS

Site ID: 67679

SIERRA SUPER STOP #2 (Continued) **S105023387**

Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2017
Citation:	22 CCR 15 66265.192(k) - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.192(k)
Violation Description:	Failure to include all required information in the tank system assessment.
Violation Notes:	Returned to compliance on 11/09/2017. Drums that were observed storing hazardous waste had illegible labels on the containers. Containers storing hazardous waste shall be labeled with the following: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date. Submit photo by the comply by date showing drums properly labled.
Violation Division:	El Dorado County Environmental Management
Violation Program:	HW
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2016
Citation:	23 CCR 16 2641(j) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2641(j)
Violation Description:	Failure of the leak detection equipment to be installed, calibrated, operated, and/or maintained properly.
Violation Notes:	Returned to compliance on 09/19/2016. Diesel mechanical line leak detector failed during initial testing. Leak detector was adjusted by the service technician and retested with passing results.
Violation Division:	El Dorado County Environmental Management
Violation Program:	UST
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2017
Citation:	23 CCR 16 2715(f) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(f)
Violation Description:	Failure to have at least one employee present during operating hours that has been trained in the proper operation and maintenance of the UST system by a designated operator (DO).
Violation Notes:	Returned to compliance on 11/09/2017. During the annual monitoring certification the two employees on site had not received designated operator (DO) training. During the hours of operation at least one employee shall have received training in the proper operation and maintenance of the UST system from the DO. Submit documentation showing all employees have received DO training by the comply by date.
Violation Division:	El Dorado County Environmental Management
Violation Program:	UST
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2017
Citation:	23 CCR 16 2715(c) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(c)
Violation Description:	Failure to comply with one or more of the following designated operator (DO) monthly inspection requirements: Be performed by an ICC certified DO. Inspect monthly alarm history report, check that alarms

SIERRA SUPER STOP #2 (Continued) **S105023387**

	are documented and responded to appropriately, and attach a copy. Inspect for the presence of liquid/debris in spill containers. Inspect for the presence of liquid/debris in under dispenser containment (UDC) and ensure that the monitoring equipment is positioned correctly. Inspect for liquid or debris in containment sumps where an alarm occurred with no service visit. Check that all testing and maintenance has been completed and documented. Verify that all facility employees have been properly trained.
Violation Notes:	Returned to compliance on 11/09/2017. Designated operator (DO) reports were not available for the following months: May 2017, June 2017, July 2017, and August 2017. DO reports shall be on site and made available for the previous 12 months. Submit DO reports for those listed missing months by the comply by date.
Violation Division:	El Dorado County Environmental Management
Violation Program:	UST
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-23-2015
Citation:	23 CCR 16 2715(a) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(a)
Violation Description:	Failure to submit statement of UST compliance and/or Designated Operator certification.
Violation Notes:	Returned to compliance on 10/28/2015. The designated operator for this facility has changed. Update the designated operator for this facility in the California Environmental Reporting System (CERS) by the comply by date.
Violation Division:	El Dorado County Environmental Management
Violation Program:	UST
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2016
Citation:	23 CCR 16 2635(a)(2)(A) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2635(a)(2)(A)
Violation Description:	Failure to comply with one or more of the following requirements for the cathodic protection system: Have corrosion protection equipment turned on and functioning properly. Inspect the impressed-current system every 60 calendar days. Inspect the impressed-current system within six months of installation and at least every three years thereafter. Test sacrificial anodes once every three years in accordance with the manufacturer?s instructions.
Violation Notes:	Returned to compliance on 10/24/2016. During the inspection the cathodic protection system did not appear to be functional as the volts and amps read zero. Submit documentation by the comply by date showing the system has been repaired and is functioning as designed.
Violation Division:	El Dorado County Environmental Management
Violation Program:	UST
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2016
Citation:	23 CCR 16 2712(b) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)

SIERRA SUPER STOP #2 (Continued) **S105023387**

Violation Description:	Failure to comply with one or more of the following corrosion protection record retention requirements: Maintain records of cathodic protection systems testing within six months of installation and at least every three years thereafter. Maintain records for the 60 calendar day inspection of the impressed-current system. Maintain records for sacrificial anodes testing every three years. Have written monitoring and maintenance records on-site or off-site at a readily available location if approved by the CUPA.
Violation Notes:	Returned to compliance on 10/24/2016. Observed that the cathodic protection system was not recorded for the months of July and August 2016 and the records show May and June of 2016 was completed on 4/01/2016. Cathodic protection system shall be recorded every 60 days and records shall be maintained on site for 3 years. Submit a photo of the September and October cathodic protection records by the comply by date.
Violation Division:	El Dorado County Environmental Management
Violation Program:	UST
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2017
Citation:	40 CFR 1 265.201(b)(3) - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.201(b)(3)
Violation Description:	Failure to operate uncovered tanks to ensure at least 60 centimeters (2 feet) of freeboard, unless the tank is equipped with a containment structure (e.g., dike or trench), a drainage control system, or a diversion structure (e.g., standby tank) with a capacity that equals or exceeds the volume of the top 60 centimeters (2 feet) of the tank.
Violation Notes:	Returned to compliance on 11/09/2017. Observed four drums of hazardous waste in garbage storage area with no accumulation date marked on drum labels. Hazardous waste shall be disposed of within 90 days of accumulation of 100kg or 27 gallons. Submit documentation showing these drums have been properly disposed of by the comply by date.
Violation Division:	El Dorado County Environmental Management
Violation Program:	HW
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-23-2015
Citation:	23 CCR 16 2715(f) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(f)
Violation Description:	Failure to comply with one or more of the following: provide training to facility employee(s) responsible for proper operation and maintenance every 12 months and/or train new employee(s) who are responsible for proper operation and maintenance within 30-days of hire and/or to have at least one employee present during operating hours that has been trained in the proper operation and maintenance of the UST system.
Violation Notes:	Returned to compliance on 10/28/2015. During the inspection it was observed that employees had not received annual designated operator (DO) training. Designated operator training shall be provided to employees every 12 months and within 30 days of hire for those employees responsible for the proper operation and maintenance of the UST system. The three employees that were onsite during the inspection received DO training. Submit documentation by the comply by date

SIERRA SUPER STOP #2 (Continued) **S105023387**

showing all employees have received current DO training.
Violation Division: El Dorado County Environmental Management
Violation Program: UST
Violation Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Violation Date: 09-19-2017
Citation: 23 CCR 16 2665 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2665
Violation Description: Failure to comply with one or more of the following: Failure to install or maintain a liquid-tight spill bucket. Have a minimum capacity of five gallons. Have a functional drain valve or other method for the removal of liquid from the spill bucket/spill container. Be resistant to galvanic corrosion.
Violation Notes: Returned to compliance on 09/19/2017. Observed product in the diesel spill bucket. Spill buckets shall be kept empty at all times. Product was removed from the spill bucket during the annual testing.
Violation Division: El Dorado County Environmental Management
Violation Program: UST
Violation Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Violation Date: 09-19-2017
Citation: 23 CCR 16 2662(c)(1)(B) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2662(c)(1)(B)
Violation Description: Failure to install corrosion protection for USTs and/or failure of the field-installed cathodic protection system to meet the consensus standards.
Violation Notes: Returned to compliance on 01/04/2018. Cathodic protection system does not appear to be in proper working order. The hour on the clock 4912.1 was the same hour that was last documented during the last 60 day inspection. System shall be evaluated by a certified cathodic protection tester. Submit documentation by the comply by date showing the cathodic protection system is operating as designed.
Violation Division: El Dorado County Environmental Management
Violation Program: UST
Violation Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Violation Date: 09-19-2017
Citation: HSC 6.5 25250.19(c) - California Health and Safety Code, Chapter 6.5, Section(s) 25250.19(c)
Violation Description: Failure to record in an operating log and retain for three years the following information for each shipment of recycled or exempted oil: 1) The name and address of the used oil recycling facility or generator claiming the oil meets the requirements of HSC 6.5 25250.1. 2) The name and address of the facility receiving the shipment. 3) The quantity of oil delivered. 4) The date of shipment or delivery. 5) A cross-reference to the records and documentation required under HSC 6.5 25250.1.
Violation Notes: Returned to compliance on 11/09/2017. No documentation of hazardous waste manifests were available at the time of inspection. Hazardous waste manifest shall be kept on site for at least three years. Submit documentation of the last two hazardous waste manifest by the comply

SIERRA SUPER STOP #2 (Continued) **S105023387**

	by date.
Violation Division:	El Dorado County Environmental Management
Violation Program:	HW
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2016
Citation:	HSC 6.7 25290.1(c)(3), 25290.2(c)(3) - California Health and Safety Code, Chapter 6.7, Section(s) 25290.1(c)(3), 25290.2(c)(3)
Violation Description:	Failure to keep water out of the secondary containment of UST systems installed on or after July 1, 2003 and before July 1, 2004, or on or after July 1, 2004.
Violation Notes:	Returned to compliance on 09/19/2016. Observed liquid in the 87 STP sump. Liquid shall be removed in order to detect a leak or release at the earliest possible opportunity. Liquid was removed by the service technician during the annual testing.
Violation Division:	El Dorado County Environmental Management
Violation Program:	UST
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2017
Citation:	22 CCR 15 66265.192(m) - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.192(m)
Violation Description:	Failure to obtain CUPA approval prior to the replacement of identical or functionally equivalent tank system parts or components.
Violation Notes:	Returned to compliance on 11/09/2017. Observed universal hazardous waste (lamps/bulbs) without labeling on bulbs. Bulbs shall be properly managed and disposed of within one year of the accumulation start date. Submit documentation by the comply by date showing these Universal hazardous waste bulbs are being managed and labeled appropriately.
Violation Division:	El Dorado County Environmental Management
Violation Program:	HW
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-23-2015
Citation:	23 CCR 16 2635 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2635
Violation Description:	Failure to inspect the impressed-current system every 60 calendar days and/or failure to have corrosion protection equipment turned on and functioning properly and/or failure to inspect the impressed-current system within six months of installation and at least every three years thereafter and/or failure to test sacrificial anodes once every three years in accordance with the manufacturer?s instructions.
Violation Notes:	Returned to compliance on 10/28/2015. It was observed that the cathodic protection system is not being inspected every 60 days as required. The January and February period was inspected on 3/2/2015 and the March and April period was inspected on 5/6/2015. Perform inspection of the cathodic protection system at least once every 60 days and maintain records of this inspection.
Violation Division:	El Dorado County Environmental Management
Violation Program:	UST

SIERRA SUPER STOP #2 (Continued) **S105023387**

Violation Source: CERS

Evaluation:

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-19-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-19-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-13-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-23-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-09-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-09-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: HW
Eval Source: CERS

SIERRA SUPER STOP #2 (Continued) **S105023387**

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-13-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-13-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-19-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-19-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: HMRRP
Eval Source: CERS

Enforcement Action:
Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Site Address: 2968 HWY 49
Site City: COOL
Site Zip: 95614
Enf Action Date: 09-19-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: El Dorado County Environmental Management
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Site Address: 2968 HWY 49
Site City: COOL
Site Zip: 95614
Enf Action Date: 09-19-2017
Enf Action Type: Notice of Violation (Unified Program)

SIERRA SUPER STOP #2 (Continued) **S105023387**

Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: El Dorado County Environmental Management
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Site Address: 2968 HWY 49
Site City: COOL
Site Zip: 95614
Enf Action Date: 09-19-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: El Dorado County Environmental Management
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Site Address: 2968 HWY 49
Site City: COOL
Site Zip: 95614
Enf Action Date: 09-23-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: El Dorado County Environmental Management
Enf Action Program: UST
Enf Action Source: CERS

Affiliation:
Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 1020 WINDING CREEK RD #100
Affiliation City: Roseville
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 95678
Affiliation Phone: Not reported

Affiliation Type Desc: Property Owner
Entity Name: TOMS SIERRA COMPANY, INC.
Entity Title: Not reported
Affiliation Address: 1020 WINDING CREEK RD #100
Affiliation City: ROSEVILLE
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 95678
Affiliation Phone: (916) 218-1600

Affiliation Type Desc: UST Tank Operator
Entity Name: Sierra Energy
Entity Title: Not reported
Affiliation Address: 1020 Winding Creek Rd. Ste 100

SIERRA SUPER STOP #2 (Continued) **S105023387**

Affiliation City:	Roseville
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	95746
Affiliation Phone:	(916) 218-1600
Affiliation Type Desc:	UST Property Owner Name
Entity Name:	Dino and Mary Masouris
Entity Title:	Not reported
Affiliation Address:	2968 Hwy 49
Affiliation City:	Cool
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	95614
Affiliation Phone:	(916) 984-3481
Affiliation Type Desc:	CUPA District
Entity Name:	El Dorado County Environmental Management
Entity Title:	Not reported
Affiliation Address:	2850 Fairlane Court, Bldg C
Affiliation City:	Placerville
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95667-4100
Affiliation Phone:	(530) 621-5300
Affiliation Type Desc:	Document Preparer
Entity Name:	Bill Jackson
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Bill Jackson
Entity Title:	Not reported
Affiliation Address:	1020 Winding Creek Rd. Ste 100
Affiliation City:	Roseville
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95678
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Bill Jackson
Entity Title:	Technology/Facilities Director
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator

SIERRA SUPER STOP #2 (Continued) **S105023387**

Entity Name: Sierra Superstop #2
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (530) 888-7080

Affiliation Type Desc: UST Tank Owner
Entity Name: Toms Sierra Co Inc
Entity Title: Not reported
Affiliation Address: 1020 Winding Creek Rd
Affiliation City: Roseville
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 95678
Affiliation Phone: (916) 218-1600

Affiliation Type Desc: Legal Owner
Entity Name: TOMS SIERRA COMPANY, INC.
Entity Title: Not reported
Affiliation Address: 1020 WINDING CREEK RD #100
Affiliation City: ROSEVILLE
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 95678
Affiliation Phone: (916) 218-1600

Affiliation Type Desc: Parent Corporation
Entity Name: Sierra Superstop #2
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: UST Permit Applicant
Entity Name: Bob Buljan
Entity Title: Director of Operations
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (916) 218-1635

CORTESE:
Region: CORTESE
Envirostor Id: Not reported
Global ID: T0601700082
Site/Facility Type: LUST CLEANUP SITE
Cleanup Status: OPEN - REMEDIATION
Status Date: Not reported

SIERRA SUPER STOP #2 (Continued) **S105023387**

Site Code:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	active
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	Not reported
WID Id:	Not reported
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported
File Name:	Active Open

HIST CORTESE:

Region:	CORTESE
Facility County Code:	9
Reg By:	LTNKA
Reg Id:	090101

CERS TANKS:

Site ID:	67679
CERS ID:	10202632
Site Name:	SIERRA SUPERSTOP #2
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2016
Citation:	HSC 6.7 25284.2 - California Health and Safety Code, Chapter 6.7, Section(s) 25284.2
Violation Description:	Failure to test the spill bucket annually.
Violation Notes:	Returned to compliance on 09/27/2016. Diesel spill bucket failed during annual testing. Spill bucket shall be capable of containing hazardous substance and preventing a release to the environment. Replace and retest diesel spill bucket by the comply by date. Because the spill bucket is direct buried a minor permit will need to be obtained prior to replacement.
Violation Division:	El Dorado County Environmental Management
Violation Program:	UST
Violation Source:	CERS

Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2017
Citation:	22 CCR 15 66265.192(k) - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.192(k)
Violation Description:	Failure to include all required information in the tank system assessment.
Violation Notes:	Returned to compliance on 11/09/2017. Drums that were observed storing hazardous waste had illegible labels on the containers. Containers storing hazardous waste shall be labeled with the following: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting

SIERRA SUPER STOP #2 (Continued) **S105023387**

	accumulation date. Submit photo by the comply by date showing drums properly labled.
Violation Division:	El Dorado County Environmental Management
Violation Program:	HW
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2016
Citation:	23 CCR 16 2641(j) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2641(j)
Violation Description:	Failure of the leak detection equipment to be installed, calibrated, operated, and/or maintained properly.
Violation Notes:	Returned to compliance on 09/19/2016. Diesel mechanical line leak detector failed during initial testing. Leak detector was adjusted by the service technician and retested with passing results.
Violation Division:	El Dorado County Environmental Management
Violation Program:	UST
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2017
Citation:	23 CCR 16 2715(f) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(f)
Violation Description:	Failure to have at least one employee present during operating hours that has been trained in the proper operation and maintenance of the UST system by a designated operator (DO).
Violation Notes:	Returned to compliance on 11/09/2017. During the annual monitoring certification the two employees on site had not received designated operator (DO) training. During the hours of operation at least one employee shall have received training in the proper operation and maintenance of the UST system from the DO. Submit documentation showing all employees have received DO training by the comply by date.
Violation Division:	El Dorado County Environmental Management
Violation Program:	UST
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2017
Citation:	23 CCR 16 2715(c) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(c)
Violation Description:	Failure to comply with one or more of the following designated operator (DO) monthly inspection requirements: Be performed by an ICC certified DO. Inspect monthly alarm history report, check that alarms are documented and responded to appropriately, and attach a copy. Inspect for the presence of liquid/debris in spill containers. Inspect for the presence of liquid/debris in under dispenser containment (UDC) and ensure that the monitoring equipment is positioned correctly. Inspect for liquid or debris in containment sumps where an alarm occurred with no service visit. Check that all testing and maintenance has been completed and documented. Verify that all facility employees have been properly trained.
Violation Notes:	Returned to compliance on 11/09/2017. Designated operator (DO) reports were not available for the following months: May 2017, June 2017, July 2017, and August 2017. DO reports shall be on site and made available

SIERRA SUPER STOP #2 (Continued) **S105023387**

for the previous 12 months. Submit DO reports for those listed missing months by the comply by date.

Violation Division: El Dorado County Environmental Management
Violation Program: UST
Violation Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Violation Date: 09-23-2015
Citation: 23 CCR 16 2715(a) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(a)
Violation Description: Failure to submit statement of UST compliance and/or Designated Operator certification.
Violation Notes: Returned to compliance on 10/28/2015. The designated operator for this facility has changed. Update the designated operator for this facility in the California Environmental Reporting System (CERS) by the comply by date.
Violation Division: El Dorado County Environmental Management
Violation Program: UST
Violation Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Violation Date: 09-19-2016
Citation: 23 CCR 16 2635(a)(2)(A) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2635(a)(2)(A)
Violation Description: Failure to comply with one or more of the following requirements for the cathodic protection system: Have corrosion protection equipment turned on and functioning properly. Inspect the impressed-current system every 60 calendar days. Inspect the impressed-current system within six months of installation and at least every three years thereafter. Test sacrificial anodes once every three years in accordance with the manufacturer?s instructions.
Violation Notes: Returned to compliance on 10/24/2016. During the inspection the cathodic protection system did not appear to be functional as the volts and amps read zero. Submit documentation by the comply by date showing the system has been repaired and is functioning as designed.
Violation Division: El Dorado County Environmental Management
Violation Program: UST
Violation Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Violation Date: 09-19-2016
Citation: 23 CCR 16 2712(b) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)
Violation Description: Failure to comply with one or more of the following corrosion protection record retention requirements: Maintain records of cathodic protection systems testing within six months of installation and at least every three years thereafter. Maintain records for the 60 calendar day inspection of the impressed-current system. Maintain records for sacrificial anodes testing every three years. Have written monitoring and maintenance records on-site or off-site at a readily available location if approved by the CUPA.
Violation Notes: Returned to compliance on 10/24/2016. Observed that the cathodic protection system was not recorded for the months of July and August 2016 and the records show May and June of 2016 was completed on

SIERRA SUPER STOP #2 (Continued) **S105023387**

4/01/2016. Cathodic protection system shall be recorded every 60 days and records shall be maintained on site for 3 years. Submit a photo of the September and October cathodic protection records by the comply by date.

Violation Division: El Dorado County Environmental Management
Violation Program: UST
Violation Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Violation Date: 09-19-2017
Citation: 40 CFR 1 265.201(b)(3) - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.201(b)(3)
Violation Description: Failure to operate uncovered tanks to ensure at least 60 centimeters (2 feet) of freeboard, unless the tank is equipped with a containment structure (e.g., dike or trench), a drainage control system, or a diversion structure (e.g., standby tank) with a capacity that equals or exceeds the volume of the top 60 centimeters (2 feet) of the tank.
Violation Notes: Returned to compliance on 11/09/2017. Observed four drums of hazardous waste in garbage storage area with no accumulation date marked on drum labels. Hazardous waste shall be disposed of within 90 days of accumulation of 100kg or 27 gallons. Submit documentation showing these drums have been properly disposed of by the comply by date.
Violation Division: El Dorado County Environmental Management
Violation Program: HW
Violation Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Violation Date: 09-23-2015
Citation: 23 CCR 16 2715(f) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(f)
Violation Description: Failure to comply with one or more of the following: provide training to facility employee(s) responsible for proper operation and maintenance every 12 months and/or train new employee(s) who are responsible for proper operation and maintenance within 30-days of hire and/or to have at least one employee present during operating hours that has been trained in the proper operation and maintenance of the UST system.
Violation Notes: Returned to compliance on 10/28/2015. During the inspection it was observed that employees had not received annual designated operator (DO) training. Designated operator training shall be provided to employees every 12 months and within 30 days of hire for those employees responsible for the proper operation and maintenance of the UST system. The three employees that were onsite during the inspection received DO training. Submit documentation by the comply by date showing all employees have received current DO training.
Violation Division: El Dorado County Environmental Management
Violation Program: UST
Violation Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Violation Date: 09-19-2017
Citation: 23 CCR 16 2665 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2665
Violation Description: Failure to comply with one or more of the following: Failure to

SIERRA SUPER STOP #2 (Continued) **S105023387**

	install or maintain a liquid-tight spill bucket. Have a minimum capacity of five gallons. Have a functional drain valve or other method for the removal of liquid from the spill bucket/spill container. Be resistant to galvanic corrosion.
Violation Notes:	Returned to compliance on 09/19/2017. Observed product in the diesel spill bucket. Spill buckets shall be kept empty at all times. Product was removed from the spill bucket during the annual testing.
Violation Division:	El Dorado County Environmental Management
Violation Program:	UST
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2017
Citation:	23 CCR 16 2662(c)(1)(B) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2662(c)(1)(B)
Violation Description:	Failure to install corrosion protection for USTs and/or failure of the field-installed cathodic protection system to meet the consensus standards.
Violation Notes:	Returned to compliance on 01/04/2018. Cathodic protection system does not appear to be in proper working order. The hour on the clock 4912.1 was the same hour that was last documented during the last 60 day inspection. System shall be evaluated by a certified cathodic protection tester. Submit documentation by the comply by date showing the cathodic protection system is operating as designed.
Violation Division:	El Dorado County Environmental Management
Violation Program:	UST
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2017
Citation:	HSC 6.5 25250.19(c) - California Health and Safety Code, Chapter 6.5, Section(s) 25250.19(c)
Violation Description:	Failure to record in an operating log and retain for three years the following information for each shipment of recycled or exempted oil: 1) The name and address of the used oil recycling facility or generator claiming the oil meets the requirements of HSC 6.5 25250.1. 2) The name and address of the facility receiving the shipment. 3) The quantity of oil delivered. 4) The date of shipment or delivery. 5) A cross-reference to the records and documentation required under HSC 6.5 25250.1.
Violation Notes:	Returned to compliance on 11/09/2017. No documentation of hazardous waste manifests were available at the time of inspection. Hazardous waste manifest shall be kept on site for at least three years. Submit documentation of the last two hazardous waste manifest by the comply by date.
Violation Division:	El Dorado County Environmental Management
Violation Program:	HW
Violation Source:	CERS
Site ID:	67679
Site Name:	SIERRA SUPERSTOP #2
Violation Date:	09-19-2016
Citation:	HSC 6.7 25290.1(c)(3), 25290.2(c)(3) - California Health and Safety Code, Chapter 6.7, Section(s) 25290.1(c)(3), 25290.2(c)(3)
Violation Description:	Failure to keep water out of the secondary containment of UST systems

SIERRA SUPER STOP #2 (Continued) **S105023387**

installed on or after July 1, 2003 and before July 1, 2004, or on or after July 1, 2004.

Violation Notes: Returned to compliance on 09/19/2016. Observed liquid in the 87 STP sump. Liquid shall be removed in order to detect a leak or release at the earliest possible opportunity. Liquid was removed by the service technician during the annual testing.
Violation Division: El Dorado County Environmental Management
Violation Program: UST
Violation Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Violation Date: 09-19-2017
Citation: 22 CCR 15 66265.192(m) - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.192(m)
Violation Description: Failure to obtain CUPA approval prior to the replacement of identical or functionally equivalent tank system parts or components.
Violation Notes: Returned to compliance on 11/09/2017. Observed universal hazardous waste (lamps/bulbs) without labeling on bulbs. Bulbs shall be properly managed and disposed of within one year of the accumulation start date. Submit documentation by the comply by date showing these Universal hazardous waste bulbs are being managed and labeled appropriately.
Violation Division: El Dorado County Environmental Management
Violation Program: HW
Violation Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Violation Date: 09-23-2015
Citation: 23 CCR 16 2635 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2635
Violation Description: Failure to inspect the impressed-current system every 60 calendar days and/or failure to have corrosion protection equipment turned on and functioning properly and/or failure to inspect the impressed-current system within six months of installation and at least every three years thereafter and/or failure to test sacrificial anodes once every three years in accordance with the manufacturer?s instructions.
Violation Notes: Returned to compliance on 10/28/2015. It was observed that the cathodic protection system is not being inspected every 60 days as required. The January and February period was inspected on 3/2/2015 and the March and April period was inspected on 5/6/2015. Perform inspection of the cathodic protection system at least once every 60 days and maintain records of this inspection.
Violation Division: El Dorado County Environmental Management
Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-19-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: HW
Eval Source: CERS

SIERRA SUPER STOP #2 (Continued) **S105023387**

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-19-2017
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-13-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-23-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-09-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-09-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-13-2013
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-13-2013
Violations Found: No

SIERRA SUPER STOP #2 (Continued) **S105023387**

Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-19-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-19-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: HMRRP
Eval Source: CERS

Enforcement Action:
Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Site Address: 2968 HWY 49
Site City: COOL
Site Zip: 95614
Enf Action Date: 09-19-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: El Dorado County Environmental Management
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Site Address: 2968 HWY 49
Site City: COOL
Site Zip: 95614
Enf Action Date: 09-19-2017
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: El Dorado County Environmental Management
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Site Address: 2968 HWY 49
Site City: COOL
Site Zip: 95614
Enf Action Date: 09-19-2017

SIERRA SUPER STOP #2 (Continued) **S105023387**

Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: El Dorado County Environmental Management
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 67679
Site Name: SIERRA SUPERSTOP #2
Site Address: 2968 HWY 49
Site City: COOL
Site Zip: 95614
Enf Action Date: 09-23-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: El Dorado County Environmental Management
Enf Action Program: UST
Enf Action Source: CERS

Affiliation:
Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 1020 WINDING CREEK RD #100
Affiliation City: Roseville
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 95678
Affiliation Phone: Not reported

Affiliation Type Desc: Property Owner
Entity Name: TOMS SIERRA COMPANY, INC.
Entity Title: Not reported
Affiliation Address: 1020 WINDING CREEK RD #100
Affiliation City: ROSEVILLE
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 95678
Affiliation Phone: (916) 218-1600

Affiliation Type Desc: UST Tank Operator
Entity Name: Sierra Energy
Entity Title: Not reported
Affiliation Address: 1020 Winding Creek Rd. Ste 100
Affiliation City: Roseville
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 95746
Affiliation Phone: (916) 218-1600

Affiliation Type Desc: UST Property Owner Name
Entity Name: Dino and Mary Masouris
Entity Title: Not reported
Affiliation Address: 2968 Hwy 49
Affiliation City: Cool
Affiliation State: CA

SIERRA SUPER STOP #2 (Continued) **S105023387**

Affiliation Country:	United States
Affiliation Zip:	95614
Affiliation Phone:	(916) 984-3481
Affiliation Type Desc:	CUPA District
Entity Name:	El Dorado County Environmental Management
Entity Title:	Not reported
Affiliation Address:	2850 Fairlane Court, Bldg C
Affiliation City:	Placerville
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95667-4100
Affiliation Phone:	(530) 621-5300
Affiliation Type Desc:	Document Preparer
Entity Name:	Bill Jackson
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Bill Jackson
Entity Title:	Not reported
Affiliation Address:	1020 Winding Creek Rd. Ste 100
Affiliation City:	Roseville
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95678
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Bill Jackson
Entity Title:	Technology/Facilities Director
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Sierra Superstop #2
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(530) 888-7080
Affiliation Type Desc:	UST Tank Owner
Entity Name:	Toms Sierra Co Inc
Entity Title:	Not reported

SIERRA SUPER STOP #2 (Continued) **S105023387**

Affiliation Address:	1020 Winding Creek Rd
Affiliation City:	Roseville
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	95678
Affiliation Phone:	(916) 218-1600
Affiliation Type Desc:	Legal Owner
Entity Name:	TOMS SIERRA COMPANY, INC.
Entity Title:	Not reported
Affiliation Address:	1020 WINDING CREEK RD #100
Affiliation City:	ROSEVILLE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	95678
Affiliation Phone:	(916) 218-1600
Affiliation Type Desc:	Parent Corporation
Entity Name:	Sierra Superstop #2
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Permit Applicant
Entity Name:	Bob Buljan
Entity Title:	Director of Operations
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(916) 218-1635

Site ID:	218267
CERS ID:	T0601700082
Site Name:	SIERRA SUPER STOP #2
CERS Description:	Leaking Underground Storage Tank Cleanup Site

Affiliation:

Affiliation Type Desc:	Regional Board Caseworker
Entity Name:	KYLE JOHNSON - CENTRAL VALLEY RWQCB (REGION 5S)
Entity Title:	Not reported
Affiliation Address:	11020 Sun Center Drive, Suite 200
Affiliation City:	SACRAMENTO
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	9164643291

B5 **NORTHSIDE MIDDLE-ELEMTRY SCHL** **SWEEPS UST** **U001612522**
SSW **3000 STATE HIGHWAY 49** **HIST UST** **N/A**
< 1/8 **COOL, CA 95614**
0.088 mi.
464 ft. **Site 1 of 3 in cluster B**

Relative:
Lower

Actual:
1516 ft.

SWEEPS UST:

Status:	Not reported
Comp Number:	43076
Number:	Not reported
Board Of Equalization:	44-003024
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	09-000-043076-000001
Tank Status:	Not reported
Capacity:	550
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	PRODUCT
Content:	DIESEL
Number Of Tanks:	1

HIST UST:

File Number:	Not reported
URL:	Not reported
Region:	STATE
Facility ID:	00000043076
Facility Type:	Other
Other Type:	ELEMENTARY SCHOOL
Contact Name:	STEVE MONTOYA
Telephone:	9168854079
Owner Name:	BLACK OAK MINE UNIFIED SCHOOL
Owner Address:	P.O. BOX 1420, 2776 MINERS FLA
Owner City,St,Zip:	GEORGETOWN, CA 95634
Total Tanks:	0001
Tank Num:	001
Container Num:	N 1
Year Installed:	1958
Tank Capacity:	00000500
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Container Construction Thickness:	Not reported
Leak Detection:	Visual

B6 **NORTHSIDE SCHOOL** **HIST UST** **S112860168**
SSW **3000 HIGHWAY 49** **HAZNET** **N/A**
< 1/8 **COOL, CA 00000**
0.088 mi.
464 ft. **Site 2 of 3 in cluster B**

Relative:
Lower

Actual:
1516 ft.

HIST UST:

File Number:	00023385
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00023385.pdf
Region:	Not reported
Facility ID:	Not reported
Facility Type:	Not reported

NORTHSIDE SCHOOL (Continued) **S112860168**

Other Type:	Not reported
Contact Name:	Not reported
Telephone:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City,St,Zip:	Not reported
Total Tanks:	Not reported
Tank Num:	Not reported
Container Num:	Not reported
Year Installed:	Not reported
Tank Capacity:	Not reported
Tank Used for:	Not reported
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Not reported

Click here for Geo Tracker PDF:

HAZNET:

Site Name:	NORTHSIDE SCHOOL
Year:	1993
GEPAID:	CAC001015696
Contact:	BLACKOAK MINE UNIFIED SCH DIST
Telephone:	9163334128
Mailing Name:	Not reported
Mailing Address:	6540 WENTHWORTH SPRINGS RD
Mailing City,St,Zip:	GEORGETOWN, CA 956340000
Gen County:	Not reported
TSD EPA ID:	CAD083166728
TSD County:	Not reported
Waste Category:	Waste oil and mixed oil
Disposal Method:	Recycler
Tons:	0.33360000000
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	9

B7 **THE GARAGE AUTOMOTIVE SERVICE AND REPAIR** **CERS HAZ WASTE** **S121767347**
South **3006 SUITE G HWY 49** **CERS** **N/A**
< 1/8 **COOL, CA 95614**
0.092 mi.
487 ft. **Site 3 of 3 in cluster B**

Relative:
Lower

Actual:
1516 ft.

CERS HAZ WASTE:

Site ID:	364179
CERS ID:	10657921
CERS Description:	Hazardous Waste Generator

Violations:

Site ID:	364179
Site Name:	The Garage Automotive Service And Repair
Violation Date:	03-15-2018
Citation:	22 CCR 15 66265.173 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.173
Violation Description:	Failure to meet the following container management requirements: (a) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste. (b) A

THE GARAGE AUTOMOTIVE SERVICE AND REPAIR (Continued) **S121767347**

	container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.
Violation Notes:	Returned to compliance on 04/05/2018. Observed used oil, used antifreeze, and used oil filter hazardous waste containers in storage area not properly closed. Hazardous waste containers must be completely closed when not actively adding materials to the container. Submit photo by the comply by date showing the hazardous storage containers are now properly closed.
Violation Division:	El Dorado County Environmental Management
Violation Program:	HW
Violation Source:	CERS
Site ID:	364179
Site Name:	The Garage Automotive Service And Repair
Violation Date:	03-15-2018
Citation:	22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description:	Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes:	Returned to compliance on 05/07/2018. The facility's CAL EPA ID is currently inactivated. As the facility is generating hazardous waste an active CAL EPA ID must be maintained. Submit documentation by the comply by date showing the CAL EPA ID has been reactivated.
Violation Division:	El Dorado County Environmental Management
Violation Program:	HW
Violation Source:	CERS
Site ID:	364179
Site Name:	The Garage Automotive Service And Repair
Violation Date:	03-15-2018
Citation:	HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description:	Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes:	Returned to compliance on 04/05/2018. No documentation of employee training was available at the time of inspection. Employees shall receive initial training within 6 months of hire and annually thereafter in safety procedures in the event of a release or threatened release of a hazardous material. Submit documentation of employee training by the comply by date.
Violation Division:	El Dorado County Environmental Management
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	364179
Site Name:	The Garage Automotive Service And Repair
Violation Date:	03-15-2018
Citation:	22 CCR 15 66265.174 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.174
Violation Description:	Failure to inspect weekly, areas where hazardous waste containers are stored or transferred. The owner or operator shall look for leaking containers and for deterioration of containers and the containment system caused by corrosion or other factors.

THE GARAGE AUTOMOTIVE SERVICE AND REPAIR (Continued) **S121767347**

Violation Notes:	Returned to compliance on 04/05/2018. Hazardous waste storage area was observed with oil in the secondary containment. Hazardous waste storage areas shall be inspected at least weekly for leaking containers, deteriorated containers, potential releases, and containment systems. Submit photo by the comply by date showing the oil storage secondary containment is now free of standing oil and storage container area is properly managed.
Violation Division:	El Dorado County Environmental Management
Violation Program:	HW
Violation Source:	CERS
Site ID:	364179
Site Name:	The Garage Automotive Service And Repair
Violation Date:	03-15-2018
Citation:	22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description:	Failure to properly label hazardous waste accumulation containers and portable tanks with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes:	Returned to compliance on 04/05/2018. Observed used oil and used antifreeze containers without proper labeling on containers. Containers shall be properly labeled after the first material is placed into container. Submit photo by the comply by date showing these hazardous waste storage containers are now properly labeled.
Violation Division:	El Dorado County Environmental Management
Violation Program:	HW
Violation Source:	CERS
Site ID:	364179
Site Name:	The Garage Automotive Service And Repair
Violation Date:	03-15-2018
Citation:	22 CCR 11 66261.7 - California Code of Regulations, Title 22, Chapter 11, Section(s) 66261.7
Violation Description:	Failure to manage empty containers greater than 5 gallons in capacity that previously held a hazardous material/waste in accordance with 22 CCR 11 66261.7 including but not limited to the following: (e)(2)By reclaiming its scrap value onsite or shipping the container or inner liner to a person who reclaims its scrap value; or (3) By reconditioning or re manufacturing the container or inner liner onsite for subsequent reuse, or shipping the container or inner liner to a person who reconditions or re-manufactures the container or inner liner; or (4) By shipping the container or inner liner to a supplier or to another intermediate collection location for accumulation prior to managing the container or inner liner pursuant to subsections (e)(2) or (e)(3) of 22 CCR 11 66261.7; or (i) By shipping the container or inner liner back to the supplier for the purpose of being refilled. (f) A container or an inner liner removed from a container larger than five gallons in capacity which is managed pursuant to subsection (e) of 22 CCR 11 66261.7 shall be marked with the date it has been emptied and shall be managed within one year of being emptied.
Violation Notes:	Returned to compliance on 04/05/2018. Observed empty containers that previously held hazardous materials onsite. Empty containers shall be managed within one year of being emptied. Submit documentation showing these empty containers have been properly managed by the comply by

THE GARAGE AUTOMOTIVE SERVICE AND REPAIR (Continued) **S121767347**

date.
Violation Division: El Dorado County Environmental Management
Violation Program: HW
Violation Source: CERS

Site ID: 364179
Site Name: The Garage Automotive Service And Repair
Violation Date: 03-15-2018
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to establish and electronically submit an adequate emergency response plan and procedures for a release or threatened release of a hazardous material.
Violation Notes: Returned to compliance on 04/05/2018. No Emergency Response/Contingency Plan has been uploaded into the California Environmental Reporting System (CERS). Upload Emergency Response/Contingency Plan into CERS by the comply by date.
Violation Division: El Dorado County Environmental Management
Violation Program: HMRRP
Violation Source: CERS

Site ID: 364179
Site Name: The Garage Automotive Service And Repair
Violation Date: 03-15-2018
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to complete and electronically submit a site map with all required content.
Violation Notes: Returned to compliance on 04/05/2018. No site map has been uploaded into the California Environmental Reporting System (CERS). Site map must include the storage locations of hazardous materials/waste, spill kits, fire extinguishers, exits, neighboring facilities, north/south reference, road ways, etc. Submit site map into CERS by the comply by date.
Violation Division: El Dorado County Environmental Management
Violation Program: HMRRP
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-15-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-15-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: HMRRP
Eval Source: CERS

THE GARAGE AUTOMOTIVE SERVICE AND REPAIR (Continued) **S121767347**

Enforcement Action:

Site ID:	364179
Site Name:	The Garage Automotive Service And Repair
Site Address:	3006 SUITE G HWY 49
Site City:	COOL
Site Zip:	95614
Enf Action Date:	03-15-2018
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	El Dorado County Environmental Management
Enf Action Program:	HMRRP
Enf Action Source:	CERS

Site ID:	364179
Site Name:	The Garage Automotive Service And Repair
Site Address:	3006 SUITE G HWY 49
Site City:	COOL
Site Zip:	95614
Enf Action Date:	03-15-2018
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	El Dorado County Environmental Management
Enf Action Program:	HW
Enf Action Source:	CERS

Affiliation:

Affiliation Type Desc:	CUPA District
Entity Name:	El Dorado County Environmental Management
Entity Title:	Not reported
Affiliation Address:	2850 Fairlane Court, Bldg C
Affiliation City:	Placerville
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95667-4100
Affiliation Phone:	(530) 621-5300

Affiliation Type Desc:	Environmental Contact
Entity Name:	Randy Surryhne
Entity Title:	Not reported
Affiliation Address:	3006 Suite G Hwy 49
Affiliation City:	Cool
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95614
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	Randy Surryhne
Entity Title:	Not reported
Affiliation Address:	3006 Suite G Hwy 49
Affiliation City:	Cool
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	95614

THE GARAGE AUTOMOTIVE SERVICE AND REPAIR (Continued) **S121767347**

Affiliation Phone:	(530) 887-1952
Affiliation Type Desc:	Parent Corporation
Entity Name:	The Garage, automotive service & repair
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	James Stanaway
Entity Title:	Not reported
Affiliation Address:	8544 Santiago Cir
Affiliation City:	Roseville
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	95747
Affiliation Phone:	(916) 599-3631
Affiliation Type Desc:	Document Preparer
Entity Name:	Randy Surryhne
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	3006 Suite G Hwy 49
Affiliation City:	Cool
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95614
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Randy Surryhne
Entity Title:	President
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	The Garage Automotive Service And Repair
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported

THE GARAGE AUTOMOTIVE SERVICE AND REPAIR (Continued) **S121767347**

Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (530) 887-1952

CERS TANKS:
Site ID: 364179
CERS ID: 10657921
Site Name: THE GARAGE AUTOMOTIVE SERVICE AND REPAIR
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 364179
Site Name: The Garage Automotive Service And Repair
Violation Date: 03-15-2018
Citation: 22 CCR 15 66265.173 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.173
Violation Description: Failure to meet the following container management requirements: (a) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste. (b) A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.
Violation Notes: Returned to compliance on 04/05/2018. Observed used oil, used antifreeze, and used oil filter hazardous waste containers in storage area not properly closed. Hazardous waste containers must be completely closed when not actively adding materials to the container. Submit photo by the comply by date showing the hazardous storage containers are now properly closed.
Violation Division: El Dorado County Environmental Management
Violation Program: HW
Violation Source: CERS

Site ID: 364179
Site Name: The Garage Automotive Service And Repair
Violation Date: 03-15-2018
Citation: 22 CCR 12 66262.12 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.12
Violation Description: Failure to obtain an Identification Number prior to treating, storing, disposing of, transporting or offering for transportation any hazardous waste.
Violation Notes: Returned to compliance on 05/07/2018. The facility's CAL EPA ID is currently inactivated. As the facility is generating hazardous waste an active CAL EPA ID must be maintained. Submit documentation by the comply by date showing the CAL EPA ID has been reactivated.
Violation Division: El Dorado County Environmental Management
Violation Program: HW
Violation Source: CERS

Site ID: 364179
Site Name: The Garage Automotive Service And Repair
Violation Date: 03-15-2018
Citation: HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description: Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a

THE GARAGE AUTOMOTIVE SERVICE AND REPAIR (Continued) **S121767347**

	hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes:	Returned to compliance on 04/05/2018. No documentation of employee training was available at the time of inspection. Employees shall receive initial training within 6 months of hire and annually thereafter in safety procedures in the event of a release or threatened release of a hazardous material. Submit documentation of employee training by the comply by date.
Violation Division:	El Dorado County Environmental Management
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	364179
Site Name:	The Garage Automotive Service And Repair
Violation Date:	03-15-2018
Citation:	22 CCR 15 66265.174 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.174
Violation Description:	Failure to inspect weekly, areas where hazardous waste containers are stored or transferred. The owner or operator shall look for leaking containers and for deterioration of containers and the containment system caused by corrosion or other factors.
Violation Notes:	Returned to compliance on 04/05/2018. Hazardous waste storage area was observed with oil in the secondary containment. Hazardous waste storage areas shall be inspected at least weekly for leaking containers, deteriorated containers, potential releases, and containment systems. Submit photo by the comply by date showing the oil storage secondary containment is now free of standing oil and storage container area is properly managed.
Violation Division:	El Dorado County Environmental Management
Violation Program:	HW
Violation Source:	CERS
Site ID:	364179
Site Name:	The Garage Automotive Service And Repair
Violation Date:	03-15-2018
Citation:	22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)
Violation Description:	Failure to properly label hazardous waste accumulation containers and portable tanks with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.
Violation Notes:	Returned to compliance on 04/05/2018. Observed used oil and used antifreeze containers without proper labeling on containers. Containers shall be properly labeled after the first material is placed into container. Submit photo by the comply by date showing these hazardous waste storage containers are now properly labeled.
Violation Division:	El Dorado County Environmental Management
Violation Program:	HW
Violation Source:	CERS
Site ID:	364179
Site Name:	The Garage Automotive Service And Repair
Violation Date:	03-15-2018
Citation:	22 CCR 11 66261.7 - California Code of Regulations, Title 22, Chapter 11, Section(s) 66261.7
Violation Description:	Failure to manage empty containers greater than 5 gallons in capacity

THE GARAGE AUTOMOTIVE SERVICE AND REPAIR (Continued) **S121767347**

	that previously held a hazardous material/waste in accordance with 22 CCR 11 66261.7 including but not limited to the following: (e)(2)By reclaiming its scrap value onsite or shipping the container or inner liner to a person who reclaims its scrap value; or (3) By reconditioning or re manufacturing the container or inner liner onsite for subsequent reuse, or shipping the container or inner liner to a person who reconditions or re-manufactures the container or inner liner; or (4) By shipping the container or inner liner to a supplier or to another intermediate collection location for accumulation prior to managing the container or inner liner pursuant to subsections (e)(2) or (e)(3) of 22 CCR 11 66261.7; or (i) By shipping the container or inner liner back to the supplier for the purpose of being refilled. (f) A container or an inner liner removed from a container larger than five gallons in capacity which is managed pursuant to subsection (e) of 22 CCR 11 66261.7 shall be marked with the date it has been emptied and shall be managed within one year of being emptied.
Violation Notes:	Returned to compliance on 04/05/2018. Observed empty containers that previously held hazardous materials onsite. Empty containers shall be managed within one year of being emptied. Submit documentation showing these empty containers have been properly managed by the comply by date.
Violation Division:	El Dorado County Environmental Management
Violation Program:	HW
Violation Source:	CERS
Site ID:	364179
Site Name:	The Garage Automotive Service And Repair
Violation Date:	03-15-2018
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to establish and electronically submit an adequate emergency response plan and procedures for a release or threatened release of a hazardous material.
Violation Notes:	Returned to compliance on 04/05/2018. No Emergency Response/Contingency Plan has been uploaded into the California Environmental Reporting System (CERS). Upload Emergency Response/Contingency Plan into CERS by the comply by date.
Violation Division:	El Dorado County Environmental Management
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	364179
Site Name:	The Garage Automotive Service And Repair
Violation Date:	03-15-2018
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit a site map with all required content.
Violation Notes:	Returned to compliance on 04/05/2018. No site map has been uploaded into the California Environmental Reporting System (CERS). Site map must include the storage locations of hazardous materials/waste, spill kits, fire extinguishers, exits, neighboring facilities, north/south reference, road ways, etc. Submit site map into CERS by the comply by date.
Violation Division:	El Dorado County Environmental Management
Violation Program:	HMRRP

THE GARAGE AUTOMOTIVE SERVICE AND REPAIR (Continued) **S121767347**

Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-15-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-15-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: El Dorado County Environmental Management
Eval Program: HMRRP
Eval Source: CERS

Enforcement Action:
Site ID: 364179
Site Name: The Garage Automotive Service And Repair
Site Address: 3006 SUITE G HWY 49
Site City: COOL
Site Zip: 95614
Enf Action Date: 03-15-2018
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: El Dorado County Environmental Management
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 364179
Site Name: The Garage Automotive Service And Repair
Site Address: 3006 SUITE G HWY 49
Site City: COOL
Site Zip: 95614
Enf Action Date: 03-15-2018
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: El Dorado County Environmental Management
Enf Action Program: HW
Enf Action Source: CERS

Affiliation:
Affiliation Type Desc: CUPA District
Entity Name: El Dorado County Environmental Management
Entity Title: Not reported
Affiliation Address: 2850 Fairlane Court, Bldg C
Affiliation City: Placerville
Affiliation State: CA
Affiliation Country: Not reported

THE GARAGE AUTOMOTIVE SERVICE AND REPAIR (Continued) **S121767347**

Affiliation Zip:	95667-4100
Affiliation Phone:	(530) 621-5300
Affiliation Type Desc:	Environmental Contact
Entity Name:	Randy Surryhne
Entity Title:	Not reported
Affiliation Address:	3006 Suite G Hwy 49
Affiliation City:	Cool
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95614
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Randy Surryhne
Entity Title:	Not reported
Affiliation Address:	3006 Suite G Hwy 49
Affiliation City:	Cool
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	95614
Affiliation Phone:	(530) 887-1952
Affiliation Type Desc:	Parent Corporation
Entity Name:	The Garage, automotive service & repair
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	James Stanaway
Entity Title:	Not reported
Affiliation Address:	8544 Santiago Cir
Affiliation City:	Roseville
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	95747
Affiliation Phone:	(916) 599-3631
Affiliation Type Desc:	Document Preparer
Entity Name:	Randy Surryhne
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	3006 Suite G Hwy 49

THE GARAGE AUTOMOTIVE SERVICE AND REPAIR (Continued) **S121767347**

Affiliation City:	Cool
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95614
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Randy Surryhne
Entity Title:	President
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	The Garage Automotive Service And Repair
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(530) 887-1952

8
WNW
< 1/8
0.114 mi.
602 ft.

EL DORADO CO FIRE PRTO STA 72 **SWEEPS UST** **S106925764**
7200 ST. FLORIN RD **N/A**
COOL, CA 95614

Relative:
Lower

Actual:
1533 ft.

SWEEPS UST:

Status:	Not reported
Comp Number:	356
Number:	Not reported
Board Of Equalization:	Not reported
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	09-000-000356-000001
Tank Status:	Not reported
Capacity:	550
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	PRODUCT
Content:	REG UNLEADED
Number Of Tanks:	1

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

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: 04/11/2019
Date Data Arrived at EDR: 04/18/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 04/18/2019
Next Scheduled EDR Contact: 07/15/2019
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: 04/11/2019
Date Data Arrived at EDR: 04/18/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 04/18/2019
Next Scheduled EDR Contact: 07/15/2019
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

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: 04/11/2019
Date Data Arrived at EDR: 04/18/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 04/18/2019
Next Scheduled EDR Contact: 07/15/2019
Data Release Frequency: Quarterly

Federal CERCLIS list

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: 04/03/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/05/2019
Next Scheduled EDR Contact: 07/15/2019
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: 03/11/2019
Date Data Arrived at EDR: 03/14/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 34

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/18/2019
Next Scheduled EDR Contact: 07/29/2019
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

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: 03/11/2019
Date Data Arrived at EDR: 03/14/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 34

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/18/2019
Next Scheduled EDR Contact: 07/29/2019
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: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/27/2019
Next Scheduled EDR Contact: 07/08/2019
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: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/27/2019
Next Scheduled EDR Contact: 07/08/2019
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: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/27/2019
Next Scheduled EDR Contact: 07/08/2019
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: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/27/2019
Next Scheduled EDR Contact: 07/08/2019
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: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/27/2019
Next Scheduled EDR Contact: 07/08/2019
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: 02/22/2019
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 41

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/10/2019
Next Scheduled EDR Contact: 08/26/2019
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: 01/31/2019
Date Data Arrived at EDR: 02/04/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/04/2019
Next Scheduled EDR Contact: 06/10/2019
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: 01/31/2019
Date Data Arrived at EDR: 02/04/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/04/2019
Next Scheduled EDR Contact: 06/10/2019
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: 03/25/2019
Date Data Arrived at EDR: 03/26/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 36

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/26/2019
Next Scheduled EDR Contact: 07/08/2019
Data Release Frequency: Quarterly

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: 01/28/2019
Date Data Arrived at EDR: 01/29/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 35

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/30/2019
Next Scheduled EDR Contact: 08/12/2019
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: 01/28/2019
Date Data Arrived at EDR: 01/29/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 35

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/30/2019
Next Scheduled EDR Contact: 08/12/2019
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: 02/11/2019
Date Data Arrived at EDR: 02/12/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 21

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 05/14/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

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: 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: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 12/11/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Quarterly

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: Varies

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 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

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 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: 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: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 02/19/2019
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
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: 10/16/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

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: 10/10/2018
Date Data Arrived at EDR: 03/08/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 54
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
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: 10/17/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
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: 10/12/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
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: 09/24/2018
Date Data Arrived at EDR: 03/12/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 50
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
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: 11/01/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
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: 10/13/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
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: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
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: 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: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
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: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
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: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
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: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
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: 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: 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: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017
Date Data Arrived at EDR: 05/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 136

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/25/2019
Next Scheduled EDR Contact: 07/22/2019
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 12/11/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Semi-Annually

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: 03/11/2019
Date Data Arrived at EDR: 03/13/2019
Date Made Active in Reports: 04/03/2019
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 03/13/2019
Next Scheduled EDR Contact: 06/24/2019
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)
Military ust sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

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: 03/18/2019
Next Scheduled EDR Contact: 07/01/2019
Data Release Frequency: Quarterly

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: 09/24/2018
Date Data Arrived at EDR: 03/12/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 50

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
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: 10/12/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
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: 10/17/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
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: 11/07/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
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: 10/16/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
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: 10/10/2018
Date Data Arrived at EDR: 03/08/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 54

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
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: 10/03/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
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: 11/01/2018
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 55

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
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

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: 03/25/2019
Next Scheduled EDR Contact: 07/08/2019
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: 01/28/2019
Date Data Arrived at EDR: 01/29/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 35
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/30/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Quarterly

State and tribal Brownfields 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: 03/25/2019
Date Data Arrived at EDR: 03/26/2019
Date Made Active in Reports: 04/29/2019
Number of Days to Update: 34
Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 03/26/2019
Next Scheduled EDR Contact: 07/08/2019
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: 12/17/2018
Date Data Arrived at EDR: 12/18/2018
Date Made Active in Reports: 01/11/2019
Number of Days to Update: 24
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/19/2019
Next Scheduled EDR Contact: 07/01/2019
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: 04/25/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 03/11/2019
Date Data Arrived at EDR: 03/13/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 48

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/13/2019
Next Scheduled EDR Contact: 06/24/2019
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 03/26/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 34

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 05/09/2019
Next Scheduled EDR Contact: 08/26/2019
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: 04/26/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Varies

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: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: No Update Planned

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

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: 04/23/2019
Next Scheduled EDR Contact: 08/12/2019
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: 02/24/2019
Date Data Arrived at EDR: 02/26/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 50
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/21/2019
Next Scheduled EDR Contact: 06/10/2019
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: 01/28/2019
Date Data Arrived at EDR: 01/29/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 35
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/30/2019
Next Scheduled EDR Contact: 08/12/2019
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: 12/31/2017
Date Data Arrived at EDR: 06/12/2018
Date Made Active in Reports: 08/06/2018
Number of Days to Update: 55
Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 07/22/2019
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: CERS HAZ 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: 04/09/2019
Date Data Arrived at EDR: 04/11/2019
Date Made Active in Reports: 05/08/2019
Number of Days to Update: 27

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 04/11/2019
Next Scheduled EDR Contact: 08/05/2019
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: 02/24/2019
Date Data Arrived at EDR: 02/26/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 50

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/21/2019
Next Scheduled EDR Contact: 06/10/2019
Data Release Frequency: Quarterly

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 02/21/2019
Date Data Arrived at EDR: 02/22/2019
Date Made Active in Reports: 04/15/2019
Number of Days to Update: 52

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/11/2019
Next Scheduled EDR Contact: 06/24/2019
Data Release Frequency: Varies

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

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 12/04/2018
Date Data Arrived at EDR: 12/06/2018
Date Made Active in Reports: 12/14/2018
Number of Days to Update: 8

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 02/21/2019
Next Scheduled EDR Contact: 06/10/2019
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

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing
Aboveground storage tank sites

Date of Government Version: 09/11/2018
Date Data Arrived at EDR: 09/12/2018
Date Made Active in Reports: 10/11/2018
Number of Days to Update: 29

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Varies

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: 04/09/2019
Date Data Arrived at EDR: 04/11/2019
Date Made Active in Reports: 05/08/2019
Number of Days to Update: 27

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/11/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Quarterly

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

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: 02/28/2019
Date Data Arrived at EDR: 03/01/2019
Date Made Active in Reports: 04/02/2019
Number of Days to Update: 32

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/27/2019
Next Scheduled EDR Contact: 06/17/2019
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: 03/11/2019
Date Data Arrived at EDR: 03/14/2019
Date Made Active in Reports: 03/21/2019
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 04/18/2019
Next Scheduled EDR Contact: 08/05/2019
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: 03/04/2019
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 27

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 03/05/2019
Next Scheduled EDR Contact: 06/17/2019
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: 03/25/2019
Date Data Arrived at EDR: 03/26/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 49

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/26/2019
Next Scheduled EDR Contact: 07/08/2019
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: 10/24/2018
Date Data Arrived at EDR: 01/24/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 40

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
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: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
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: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Quarterly

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: 03/25/2019
Date Data Arrived at EDR: 03/27/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/27/2019
Next Scheduled EDR Contact: 07/08/2019
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: 01/31/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 04/03/2019
Next Scheduled EDR Contact: 06/03/2019
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: 888-275-8747
Last EDR Contact: 04/12/2019
Next Scheduled EDR Contact: 07/22/2019
Data Release Frequency: Semi-Annually

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: 04/12/2019
Next Scheduled EDR Contact: 07/22/2019
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: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/13/2019
Next Scheduled EDR Contact: 08/26/2019
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: 03/25/2019
Date Data Arrived at EDR: 03/26/2019
Date Made Active in Reports: 05/07/2019
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/26/2019
Next Scheduled EDR Contact: 07/08/2019
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: 05/06/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Quarterly

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: 05/10/2019
Next Scheduled EDR Contact: 08/19/2019
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: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/22/2019
Next Scheduled EDR Contact: 07/01/2019
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: 12/31/2016
Date Data Arrived at EDR: 01/10/2018
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 2

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/20/2019
Next Scheduled EDR Contact: 06/03/2019
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: 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: 04/24/2019
Next Scheduled EDR Contact: 08/05/2019
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: 03/11/2019
Date Data Arrived at EDR: 03/14/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 18

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 04/18/2019
Next Scheduled EDR Contact: 06/17/2019
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: 02/01/2019
Date Data Arrived at EDR: 02/14/2019
Date Made Active in Reports: 03/21/2019
Number of Days to Update: 35

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
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: 03/11/2019
Date Data Arrived at EDR: 03/14/2019
Date Made Active in Reports: 04/17/2019
Number of Days to Update: 34

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 05/10/2019
Next Scheduled EDR Contact: 08/19/2019
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: 03/20/2019
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 34

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/10/2019
Next Scheduled EDR Contact: 07/22/2019
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: 04/08/2019
Next Scheduled EDR Contact: 07/22/2019
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: 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: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

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: 08/30/2016
Date Data Arrived at EDR: 09/08/2016
Date Made Active in Reports: 10/21/2016
Number of Days to Update: 43

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
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: 12/31/2005
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: 03/07/2019
Next Scheduled EDR Contact: 06/17/2019
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: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 03/05/2019
Next Scheduled EDR Contact: 06/17/2019
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: 05/24/2017
Date Data Arrived at EDR: 11/30/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 15
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 04/26/2019
Next Scheduled EDR Contact: 08/05/2019
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: 04/02/2019
Date Data Arrived at EDR: 04/02/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 42
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 04/02/2019
Next Scheduled EDR Contact: 07/15/2019
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: 12/03/2018
Date Data Arrived at EDR: 01/29/2019
Date Made Active in Reports: 03/21/2019
Number of Days to Update: 51
Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 04/30/2019
Next Scheduled EDR Contact: 08/12/2019
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: 12/31/2018
Date Data Arrived at EDR: 02/11/2019
Date Made Active in Reports: 03/21/2019
Number of Days to Update: 38

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/05/2019
Next Scheduled EDR Contact: 07/22/2019
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: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 02/13/2019
Next Scheduled EDR Contact: 06/03/2019
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: 04/11/2019
Next Scheduled EDR Contact: 07/22/2019
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: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 08/19/2019
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: 06/23/2017
Date Data Arrived at EDR: 10/11/2017
Date Made Active in Reports: 11/03/2017
Number of Days to Update: 23

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 02/22/2019
Next Scheduled EDR Contact: 06/03/2019
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 04/11/2019
Date Data Arrived at EDR: 04/18/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 04/18/2019
Next Scheduled EDR Contact: 07/15/2019
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

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: 11/27/2018
Date Data Arrived at EDR: 02/27/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 33

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 02/27/2019
Next Scheduled EDR Contact: 06/10/2019
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: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 03/01/2019
Next Scheduled EDR Contact: 06/10/2019
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: 03/01/2019
Next Scheduled EDR Contact: 06/10/2019
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 03/27/2019
Date Data Arrived at EDR: 03/28/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 34

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 03/21/2019
Next Scheduled EDR Contact: 06/24/2019
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: 02/15/2019
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 03/15/2019
Number of Days to Update: 10

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 03/05/2019
Next Scheduled EDR Contact: 06/17/2019
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: 03/03/2019
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 04/09/2019
Next Scheduled EDR Contact: 07/22/2019
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: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 03/01/2019
Next Scheduled EDR Contact: 06/10/2019
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/17/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 74

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/15/2019
Next Scheduled EDR Contact: 07/29/2019
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: 02/19/2019
Date Data Arrived at EDR: 02/21/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 39

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 02/21/2019
Next Scheduled EDR Contact: 06/03/2019
Data Release Frequency: Quarterly

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

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: 03/25/2019
Date Data Arrived at EDR: 03/26/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 36

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 03/26/2019
Next Scheduled EDR Contact: 07/08/2019
Data Release Frequency: Quarterly

CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 04/18/2019
Date Data Arrived at EDR: 04/19/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 11

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 04/18/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Varies

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing

list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 01/23/2019
Date Data Arrived at EDR: 02/26/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 34

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 05/14/2019
Next Scheduled EDR Contact: 08/26/2019
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: 02/27/2019
Date Data Arrived at EDR: 02/28/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 32

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 02/27/2019
Next Scheduled EDR Contact: 06/17/2019
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: 12/13/2018
Date Data Arrived at EDR: 01/17/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 47

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 02/27/2019
Next Scheduled EDR Contact: 06/17/2019
Data Release Frequency: Annually

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: 03/19/2019
Date Data Arrived at EDR: 03/22/2019
Date Made Active in Reports: 04/09/2019
Number of Days to Update: 18

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 03/22/2019
Next Scheduled EDR Contact: 06/10/2019
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: 12/31/2017
Date Data Arrived at EDR: 06/20/2018
Date Made Active in Reports: 08/06/2018
Number of Days to Update: 47

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 03/22/2019
Next Scheduled EDR Contact: 07/01/2019
Data Release Frequency: Varies

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: 11/01/2018
Date Data Arrived at EDR: 11/02/2018
Date Made Active in Reports: 12/13/2018
Number of Days to Update: 41

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 05/14/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 01/10/2019
Date Data Arrived at EDR: 01/23/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 41

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
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: 02/15/2019
Date Data Arrived at EDR: 02/19/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 14

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 05/09/2019
Next Scheduled EDR Contact: 08/26/2019
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: 12/31/2017
Date Data Arrived at EDR: 10/10/2018
Date Made Active in Reports: 11/16/2018
Number of Days to Update: 37

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 07/22/2019
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 02/19/2019
Date Data Arrived at EDR: 02/20/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 13

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 02/20/2019
Next Scheduled EDR Contact: 06/03/2019
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: 02/19/2019
Date Data Arrived at EDR: 02/20/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/20/2019
Next Scheduled EDR Contact: 06/03/2019
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: 01/07/2019
Date Data Arrived at EDR: 01/08/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 56

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 04/09/2019
Next Scheduled EDR Contact: 07/22/2019
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/12/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 34

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
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: 02/20/2019
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 04/02/2019
Number of Days to Update: 28

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 03/05/2019
Next Scheduled EDR Contact: 06/17/2019
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 02/11/2019
Date Data Arrived at EDR: 02/12/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 23

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 05/14/2019
Next Scheduled EDR Contact: 08/26/2019
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: 03/04/2019
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 04/05/2019
Number of Days to Update: 31

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 03/05/2019
Next Scheduled EDR Contact: 06/17/2019
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 03/11/2019
Date Data Arrived at EDR: 03/13/2019
Date Made Active in Reports: 04/29/2019
Number of Days to Update: 47

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/13/2019
Next Scheduled EDR Contact: 06/24/2019
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: 03/18/2019
Date Data Arrived at EDR: 03/19/2019
Date Made Active in Reports: 04/29/2019
Number of Days to Update: 41

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 03/18/2019
Next Scheduled EDR Contact: 07/01/2019
Data Release Frequency: No Update Planned

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 04/27/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 07/17/2018
Number of Days to Update: 34

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 03/13/2019
Next Scheduled EDR Contact: 06/24/2019
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
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: 05/08/2018
Date Data Arrived at EDR: 07/11/2018
Date Made Active in Reports: 09/13/2018
Number of Days to Update: 64

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 04/12/2019
Next Scheduled EDR Contact: 07/22/2019
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: 02/13/2019
Next Scheduled EDR Contact: 06/03/2019
Data Release Frequency: Quarterly

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)

Military privatized sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)

Projects sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
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: 03/11/2019
Date Data Arrived at EDR: 03/13/2019
Date Made Active in Reports: 04/29/2019
Number of Days to Update: 47

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 03/13/2019
Next Scheduled EDR Contact: 06/24/2019
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: 03/05/2019
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 04/02/2019
Number of Days to Update: 28

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 03/05/2019
Next Scheduled EDR Contact: 06/17/2019
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: 04/09/2019
Date Data Arrived at EDR: 04/11/2019
Date Made Active in Reports: 05/08/2019
Number of Days to Update: 27

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/11/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

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: 03/25/2019
Next Scheduled EDR Contact: 07/08/2019
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)

Produced water ponds sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)

Sampling point - public sites

Date of Government Version: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
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: 12/10/2018
Date Data Arrived at EDR: 12/11/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

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

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: 04/22/2019
Next Scheduled EDR Contact: 07/22/2019
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 01/07/2019
Date Data Arrived at EDR: 01/08/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 59

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/08/2019
Next Scheduled EDR Contact: 04/24/2047
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List

Cupa Facility List

Date of Government Version: 01/07/2019
Date Data Arrived at EDR: 01/08/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 58

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 02/27/2019
Next Scheduled EDR Contact: 06/17/2019
Data Release Frequency: Varies

BUTTE COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 04/08/2019
Next Scheduled EDR Contact: 07/22/2019
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 01/24/2019
Date Data Arrived at EDR: 01/25/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 39

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 03/25/2019
Next Scheduled EDR Contact: 07/08/2019
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 02/27/2019
Date Data Arrived at EDR: 02/28/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 32

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 08/19/2019
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: 02/14/2019
Date Data Arrived at EDR: 02/19/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 17

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 04/29/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 01/16/2019
Date Data Arrived at EDR: 02/05/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 28

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 04/25/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 02/27/2019
Date Data Arrived at EDR: 02/28/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 32

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 04/29/2019
Next Scheduled EDR Contact: 08/12/2019
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: 04/10/2019
Date Data Arrived at EDR: 04/11/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 19

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 03/29/2019
Next Scheduled EDR Contact: 07/15/2019
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: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 12/11/2018
Date Data Arrived at EDR: 12/13/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 33

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 11/19/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 01/18/2019
Date Data Arrived at EDR: 01/23/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 41

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
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: 02/13/2019
Next Scheduled EDR Contact: 06/03/2019
Data Release Frequency: Varies

KERN COUNTY:

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 01/28/2019
Date Data Arrived at EDR: 02/07/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 29

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 08/19/2019
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: 02/14/2019
Date Data Arrived at EDR: 02/19/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 14

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 02/13/2019
Next Scheduled EDR Contact: 06/03/2019
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 02/08/2019
Date Data Arrived at EDR: 02/12/2019
Date Made Active in Reports: 03/12/2019
Number of Days to Update: 28

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 04/15/2019
Next Scheduled EDR Contact: 07/29/2019
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/17/2019
Date Data Arrived at EDR: 01/18/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 46

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
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: 03/18/2019
Next Scheduled EDR Contact: 07/01/2019
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List

Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 12/19/2018
Date Data Arrived at EDR: 01/10/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 56

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 07/22/2019
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities

Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/14/2019
Date Data Arrived at EDR: 01/15/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 51

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 04/16/2019
Next Scheduled EDR Contact: 07/29/2019
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: 01/01/2019
Date Data Arrived at EDR: 01/15/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 51

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 04/15/2019
Next Scheduled EDR Contact: 07/29/2019
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: 01/30/2019
Date Data Arrived at EDR: 02/01/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 34

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 04/16/2019
Next Scheduled EDR Contact: 07/29/2019
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: 04/15/2019
Next Scheduled EDR Contact: 07/29/2019
Data Release Frequency: Semi-Annually

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: 03/09/2017
Date Data Arrived at EDR: 03/10/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 54

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Annually

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 10/02/2018
Date Data Arrived at EDR: 10/05/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 28

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
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: 02/20/2019
Date Data Arrived at EDR: 02/22/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 13

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 02/15/2019
Next Scheduled EDR Contact: 06/03/2019
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: 03/29/2019
Next Scheduled EDR Contact: 07/15/2019
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 03/11/2019
Date Data Arrived at EDR: 03/19/2019
Date Made Active in Reports: 05/08/2019
Number of Days to Update: 50

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 03/18/2019
Next Scheduled EDR Contact: 06/03/2019
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 02/21/2019
Date Data Arrived at EDR: 02/26/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 34

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 02/21/2019
Next Scheduled EDR Contact: 06/10/2019
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 02/05/2019
Date Data Arrived at EDR: 02/07/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 26

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 04/01/2019
Next Scheduled EDR Contact: 07/15/2019
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: 02/21/2019
Next Scheduled EDR Contact: 06/10/2019
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: 02/21/2019
Date Data Arrived at EDR: 02/22/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 14

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/21/2019
Next Scheduled EDR Contact: 06/10/2019
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 01/25/2019
Date Data Arrived at EDR: 01/29/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 35

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 05/13/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 01/02/2019
Date Data Arrived at EDR: 02/07/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 26

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/06/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 01/02/2019
Date Data Arrived at EDR: 02/08/2019
Date Made Active in Reports: 03/06/2019
Number of Days to Update: 26

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/06/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 01/02/2019
Date Data Arrived at EDR: 02/05/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 31

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/07/2019
Next Scheduled EDR Contact: 08/19/2019
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: 02/28/2019
Date Data Arrived at EDR: 03/01/2019
Date Made Active in Reports: 04/12/2019
Number of Days to Update: 42

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 02/27/2019
Next Scheduled EDR Contact: 06/17/2019
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 01/14/2019
Date Data Arrived at EDR: 01/18/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 46

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
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: 04/11/2019
Date Data Arrived at EDR: 04/12/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 18

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/18/2019
Next Scheduled EDR Contact: 07/01/2019
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 01/29/2019
Date Data Arrived at EDR: 01/31/2019
Date Made Active in Reports: 03/08/2019
Number of Days to Update: 36

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/18/2019
Next Scheduled EDR Contact: 07/01/2019
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: 11/07/2018
Date Data Arrived at EDR: 01/04/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 60

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/02/2019
Next Scheduled EDR Contact: 07/15/2019
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: 11/07/2018
Date Data Arrived at EDR: 12/28/2018
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 67

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/02/2019
Next Scheduled EDR Contact: 07/15/2019
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List

Cupa facility list

Date of Government Version: 03/11/2019
Date Data Arrived at EDR: 03/13/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 48

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 08/19/2019
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: 02/27/2019
Date Data Arrived at EDR: 02/28/2019
Date Made Active in Reports: 04/02/2019
Number of Days to Update: 33

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 05/06/2019
Next Scheduled EDR Contact: 08/19/2019
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: 03/04/2019
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 04/02/2019
Number of Days to Update: 28

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 03/05/2019
Next Scheduled EDR Contact: 06/17/2019
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 56
Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
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: 03/06/2019
Date Data Arrived at EDR: 03/06/2019
Date Made Active in Reports: 04/29/2019
Number of Days to Update: 54
Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
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: 02/27/2019
Next Scheduled EDR Contact: 06/17/2019
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

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: 05/02/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Quarterly

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/05/2018
Date Data Arrived at EDR: 11/06/2018
Date Made Active in Reports: 12/14/2018
Number of Days to Update: 38
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Quarterly

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: 03/18/2019
Next Scheduled EDR Contact: 07/01/2019
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 02/13/2019
Date Data Arrived at EDR: 02/15/2019
Date Made Active in Reports: 03/14/2019
Number of Days to Update: 27

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 02/13/2019
Next Scheduled EDR Contact: 06/03/2019
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: 03/04/2019
Date Data Arrived at EDR: 03/13/2019
Date Made Active in Reports: 04/29/2019
Number of Days to Update: 47

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/13/2019
Next Scheduled EDR Contact: 06/24/2019
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: 12/13/2018
Date Data Arrived at EDR: 12/18/2018
Date Made Active in Reports: 01/23/2019
Number of Days to Update: 36

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/25/2019
Next Scheduled EDR Contact: 06/24/2019
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: 02/13/2019
Next Scheduled EDR Contact: 06/03/2019
Data Release Frequency: Varies

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 02/13/2019
Date Data Arrived at EDR: 02/19/2019
Date Made Active in Reports: 03/06/2019
Number of Days to Update: 15

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 02/13/2019
Next Scheduled EDR Contact: 06/03/2019
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: 02/21/2019
Next Scheduled EDR Contact: 06/10/2019
Data Release Frequency: Annually

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 01/30/2019
Date Data Arrived at EDR: 02/01/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 34
Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Annually

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: 02/13/2019
Next Scheduled EDR Contact: 06/03/2019
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: 02/13/2019
Next Scheduled EDR Contact: 06/03/2019
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: 03/05/2019
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 04/29/2019
Number of Days to Update: 53
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 02/27/2019
Next Scheduled EDR Contact: 06/17/2019
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 03/05/2019
Date Data Arrived at EDR: 03/07/2019
Date Made Active in Reports: 04/03/2019
Number of Days to Update: 27
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 02/27/2019
Next Scheduled EDR Contact: 06/17/2019
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 03/18/2019
Date Data Arrived at EDR: 03/26/2019
Date Made Active in Reports: 05/01/2019
Number of Days to Update: 36

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 03/25/2019
Next Scheduled EDR Contact: 07/08/2019
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: 04/03/2019
Date Data Arrived at EDR: 04/11/2019
Date Made Active in Reports: 04/30/2019
Number of Days to Update: 19

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 04/08/2019
Next Scheduled EDR Contact: 07/08/2019
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 12/11/2018
Date Data Arrived at EDR: 12/13/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 33

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 04/15/2019
Next Scheduled EDR Contact: 07/29/2019
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 02/28/2019
Date Data Arrived at EDR: 03/01/2019
Date Made Active in Reports: 04/03/2019
Number of Days to Update: 33

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 02/27/2019
Next Scheduled EDR Contact: 06/17/2019
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 12/13/2018
Date Data Arrived at EDR: 12/18/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 28

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 05/02/2019
Next Scheduled EDR Contact: 08/19/2019
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 01/18/2019
Date Data Arrived at EDR: 01/23/2019
Date Made Active in Reports: 03/06/2019
Number of Days to Update: 42

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 04/22/2019
Next Scheduled EDR Contact: 08/05/2019
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 12/26/2018
Date Data Arrived at EDR: 12/27/2018
Date Made Active in Reports: 01/15/2019
Number of Days to Update: 19

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 05/06/2019
Next Scheduled EDR Contact: 08/19/2019
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: 05/02/2019
Next Scheduled EDR Contact: 08/05/2019
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: 12/26/2018
Date Data Arrived at EDR: 01/24/2019
Date Made Active in Reports: 02/28/2019
Number of Days to Update: 35

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 04/23/2019
Next Scheduled EDR Contact: 08/05/2019
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: 03/29/2019
Next Scheduled EDR Contact: 07/15/2019
Data Release Frequency: Annually

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: 05/09/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: Quarterly

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: 12/26/2018
Date Data Arrived at EDR: 01/24/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 42
Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 04/23/2019
Next Scheduled EDR Contact: 08/05/2019
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: 02/26/2019
Date Data Arrived at EDR: 03/13/2019
Date Made Active in Reports: 04/03/2019
Number of Days to Update: 21
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/13/2019
Next Scheduled EDR Contact: 06/24/2019
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: 12/26/2018
Date Data Arrived at EDR: 01/03/2019
Date Made Active in Reports: 01/16/2019
Number of Days to Update: 13
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 03/29/2019
Next Scheduled EDR Contact: 07/15/2019
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 02/08/2019
Date Data Arrived at EDR: 02/12/2019
Date Made Active in Reports: 03/06/2019
Number of Days to Update: 22
Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 04/25/2019
Next Scheduled EDR Contact: 08/12/2019
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: 02/11/2019
Date Data Arrived at EDR: 02/12/2019
Date Made Active in Reports: 03/04/2019
Number of Days to Update: 20
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/14/2019
Next Scheduled EDR Contact: 08/26/2019
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 07/13/2018
Date Made Active in Reports: 08/01/2018
Number of Days to Update: 19

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/10/2019
Next Scheduled EDR Contact: 07/22/2019
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: 01/01/2019
Date Data Arrived at EDR: 01/30/2019
Date Made Active in Reports: 02/14/2019
Number of Days to Update: 15

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 05/01/2019
Next Scheduled EDR Contact: 08/12/2019
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 10/23/2018
Date Made Active in Reports: 11/27/2018
Number of Days to Update: 35

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/15/2019
Next Scheduled EDR Contact: 07/29/2019
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 04/09/2018
Number of Days to Update: 45

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/19/2019
Next Scheduled EDR Contact: 06/03/2019
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/15/2018
Date Made Active in Reports: 07/09/2018
Number of Days to Update: 24

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/11/2019
Next Scheduled EDR Contact: 06/24/2019
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: PennWell Corporation
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 PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data
Source: PennWell Corporation
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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 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 and 2010 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

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

APN 071-500-037
1020 NORTHSIDE DRIVE
COOL, CA 95614

TARGET PROPERTY COORDINATES

Latitude (North):	38.888497 - 38° 53' 18.59''
Longitude (West):	121.015534 - 121° 0' 55.92''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	672119.6
UTM Y (Meters):	4306067.0
Elevation:	1535 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5619680 AUBURN, CA
Version Date:	2012
Northeast Map:	5603962 GREENWOOD, CA
Version Date:	2012
Southeast Map:	5603960 COLOMA, CA
Version Date:	2012
Southwest Map:	5629064 PILOT HILL, CA
Version Date:	2012

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).

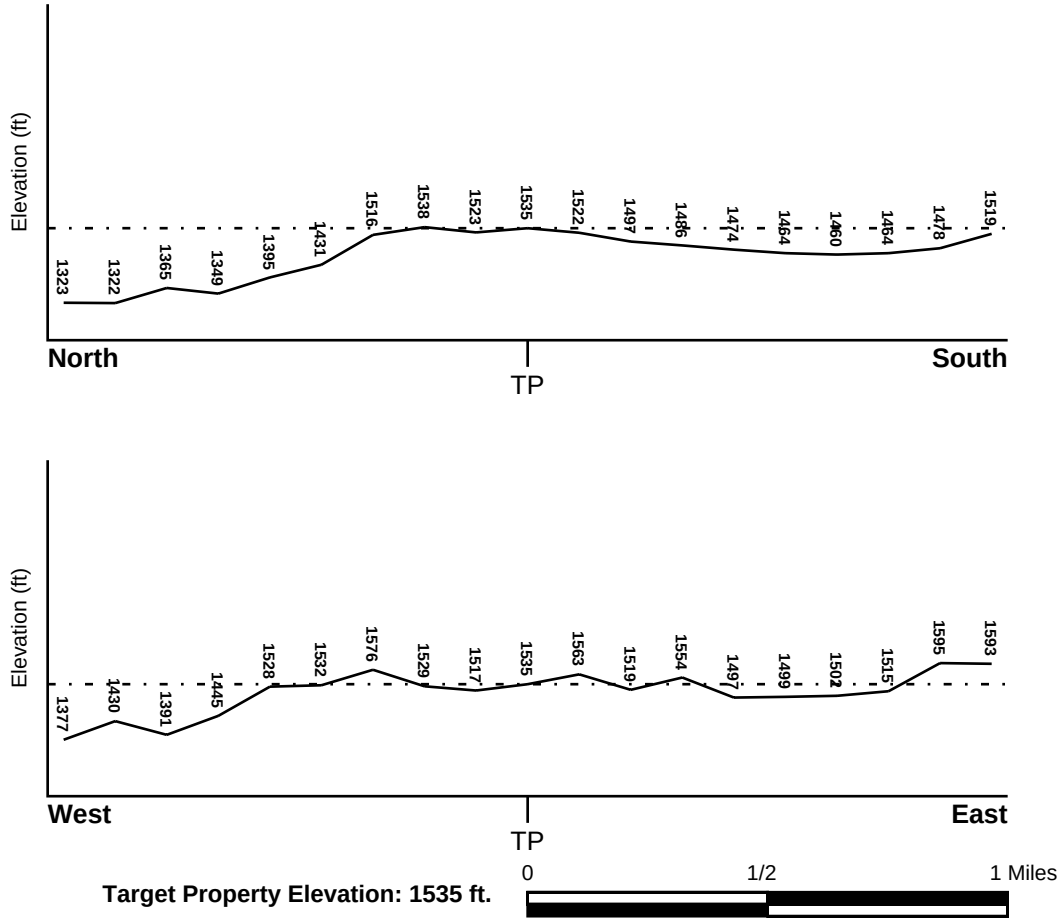
TOPOGRAPHIC INFORMATION

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 SSE

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

Flood Plain Panel at Target Property	FEMA Source Type
06017C0175E	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06017C0200E	FEMA FIRM Flood data
06017C0450E	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
AUBURN	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

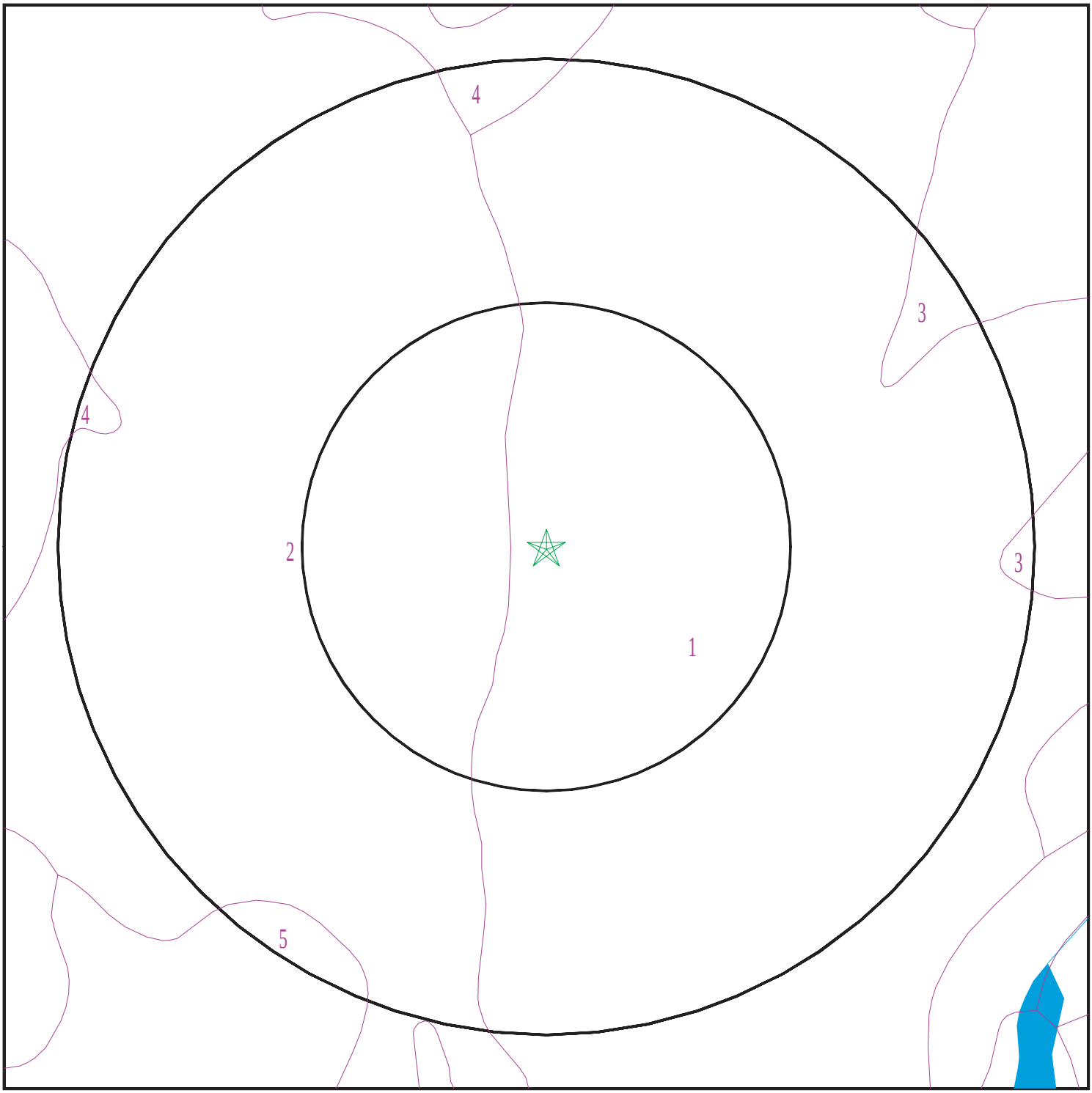
Era:	Mesozoic
System:	Lower Jurassic and Upper Triassic
Series:	Lower Mesozoic
Code:	lMze *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Eugeosynclinal Deposits

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 - 5654784.2s



SITE NAME:	APN 071-500-037	CLIENT:	Bole and Associates
ADDRESS:	1020 Northside Drive Cool CA 95614	CONTACT:	David Bole
		INQUIRY #:	5654784.2s
LAT/LONG:	38.888497 / 121.015534	DATE:	May 16, 2019 2:03 pm

Copyright © 2019 EDR, Inc. © 2015 TomTom Rel. 2015.

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: DELPIEDRA

Soil Surface Texture: 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: > 0 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	1 inches	loam	Not reported	Not reported	Max: Min:	Max: Min:
2	1 inches	11 inches	loam	Not reported	Not reported	Max: Min:	Max: Min:
3	11 inches	16 inches	weathered bedrock	Not reported	Not reported	Max: 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

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: Min:	Max: Min:
2	14 inches	18 inches	unweathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 3

Soil Component Name: SERPENTINE ROCK LAND

Soil Surface Texture: unweathered bedrock

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:
Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 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	3 inches	unweathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 4

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: Min:	Max: Min:
2	14 inches	18 inches	unweathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 5

Soil Component Name: SOBRANTE

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 77 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

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	11 inches	silt loam	Not reported	Not reported	Max: Min:	Max: Min:
2	11 inches	24 inches	clay loam	Not reported	Not reported	Max: Min:	Max: Min:
3	24 inches	29 inches	weathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:
4	29 inches	33 inches	unweathered bedrock	Not reported	Not reported	Max: 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

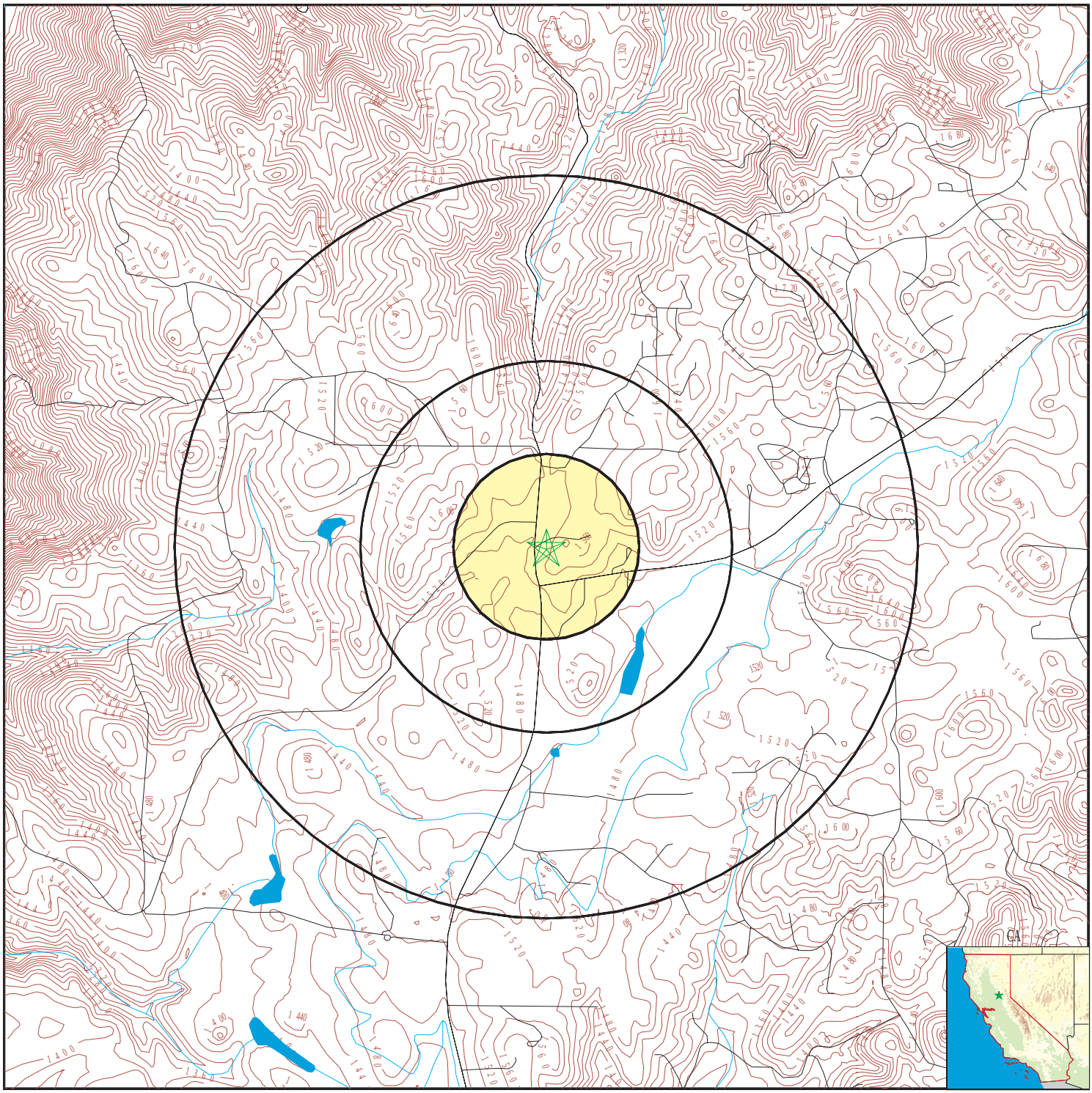
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 5654784.2s



- 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:	APN 071-500-037	CLIENT:	Bole and Associates
ADDRESS:	1020 Northside Drive Cool CA 95614	CONTACT:	David Bole
		INQUIRY #:	5654784.2s
LAT/LONG:	38.888497 / 121.015534	DATE:	May 16, 2019 2:03 pm

Copyright © 2019 EDR, Inc. © 2015 TomTom Rel. 2015.

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
95614	4	0

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 Zip Code: 95614

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.500 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

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 and 2010 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.

STATE RECORDS

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.

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.

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.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

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.

STREET AND ADDRESS INFORMATION

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

APPENDIX D: HISTORICAL RESEARCH DOCUMENTATION

ENVIRONMENTAL LIEN SEARCH REPORT

HISTORIC AERIAL PHOTOGRAPHS

HISTORICAL TOPOGRAPHIC MAPS

SANBORN MAP REPORT

PROPERTY TAX MAP REPORT

BUILDING DEPARTMENT RECORDS REPORT

CITY DIRECTORY REPORT

APN 071-500-037
1020 Northside Drive
Cool, CA 95614

Inquiry Number: 5654784.7
May 17, 2019

EDR Environmental Lien and AUL Search

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

EDR Environmental Lien and AUL Search

The EDR Environmental Lien and AUL Search 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.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction orforecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2017 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc. or its affiliates is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

EDR Environmental Lien and AUL Search

TARGET PROPERTY INFORMATION

ADDRESS

1020 Northside Drive
APN 071-500-037
Cool, CA 95614

ENVIRONMENTAL LIEN

Environmental Lien: Found ☐ Not Found ☒

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

AULs: Found ☐ Not Found ☒

RESEARCH SOURCE

Source 1:

El dorado Recorder
El Dorado, CA

PROPERTY INFORMATION

Deed 1:

Type of Deed:	deed
Title is vested in:	Cool Time LLC
Title received from:	Howard JOnes Investments LLC
Deed Dated	1/23/2017
Deed Recorded:	1/24/2017
Book:	NA
Page:	na
Volume:	na
Instrument:	na
Docket:	NA
Land Record Comments:	
Miscellaneous Comments:	
Legal Description:	See Exhibit
Legal Current Owner:	Cool Time LLC
Parcel # / Property Identifier:	071-500-37-100
Comments:	See Exhibit

Deed Exhibit 1

RECORDING REQUESTED BY
COOL TIME, LLC

WHEN RECORDED MAIL TO:
COOL TIME, LLC
8251 Alpine Ave
Sacramento, Ca. 95826

AND MAIL TAX STATEMENTS TO:
COOL TIME, LLC
8251 Alpine Ave
Sacramento, Ca. 95826

El Dorado, County Recorder
William Schultz Co Recorder Office
DOC- 2017-0003332-00
Tuesday, JAN 24, 2017 09:31:59
Ttl Pd $21.00 Nbr-0001829007
JLR / C1 / 1-2

GRANT DEED

APN NO. 071-500-37-100

The undersigned Transferor declares:
DOCUMENTARY TRANSFER TAX: NONE
EXEMPTION (R&T CODE): 11925
EXPLANATION: Grantor and Grantee are comprised
Of the same parties and their proportional interest
Remains the same immediately following the transfer.

PCOS
FILED

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, Howard Jones Investments LLC hereby GRANTS to COOL TIME, LLC, a California limited liability company that property in Unincorporated area of El Dorado County, State of California, described as follows:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

HOWARD JONES INVESTMENTS, LLC

Dated: Jan. 23 2017 ~~2016~~ KM

BY: Paul G Howard
Paul G Howard,
Its sole and managing member

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached and not the truthfulness, accuracy, or validity of that document.

State of California
County of El Dorado
On Jan. 23, 2017 before me, Kristi Mollet, Notary Public (here insert name and title of the officer), personally appeared Paul G. Howard, 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.
WITNESS my hand and official seal.
Signature _____ (Seal)

KRISTI MOLLET
Commission # 2082350
Notary Public - California
El Dorado County
My Comm. Expires Sep 30, 2018

ORDER NO. : 2123018038-MB

EXHIBIT A

The land referred to is situated in the unincorporated area of the County of El Dorado, State of California, and is described as follows:

TRACT ONE:

PARCEL ONE:

Parcel 1 as shown on the Parcel Map filed January 5, 1982 in Book 30 of Parcel Maps, Page 71, El Dorado County Records.

PARCEL TWO:

Together with and reserving therefrom an easement for road and public utilities purposes as shown on the above Parcel Map.

APN: 071-500-37

APN 071-500-037

1020 Northside Drive

Cool, CA 95614

Inquiry Number: 5654784.11

May 16, 2019

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

05/16/19

Site Name:

APN 071-500-037
1020 Northside Drive
Cool, CA 95614
EDR Inquiry # 5654784.11

Client Name:

Bole and Associates
6898 Penny Way
Brown Valley, CA 95918
Contact: David Bole

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
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1993	1"=500'	Acquisition Date: May 09, 1993	USGS/DOQQ
1984	1"=500'	Flight Date: June 29, 1984	USDA
1975	1"=500'	Flight Date: August 25, 1975	USGS
1952	1"=500'	Flight Date: July 24, 1952	USGS
1940	1"=500'	Flight Date: June 30, 1940	USDA
1938	1"=500'	Flight Date: September 11, 1938	USDA

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2019 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

INQUIRY #: 5654784.11
YEAR: 2016
= 500'
N
EDR

INQUIRY #: 5654784.11

YEAR: 2012

= 500'

N

EDR

INQUIRY #: 5654784.11
YEAR: 2009
= 500'
N
EDR

INQUIRY #: 5654784.11
YEAR: 2006
= 500'
N
EDR

INQUIRY #: 5654784.11
YEAR: 1993
= 500'
N
EDR

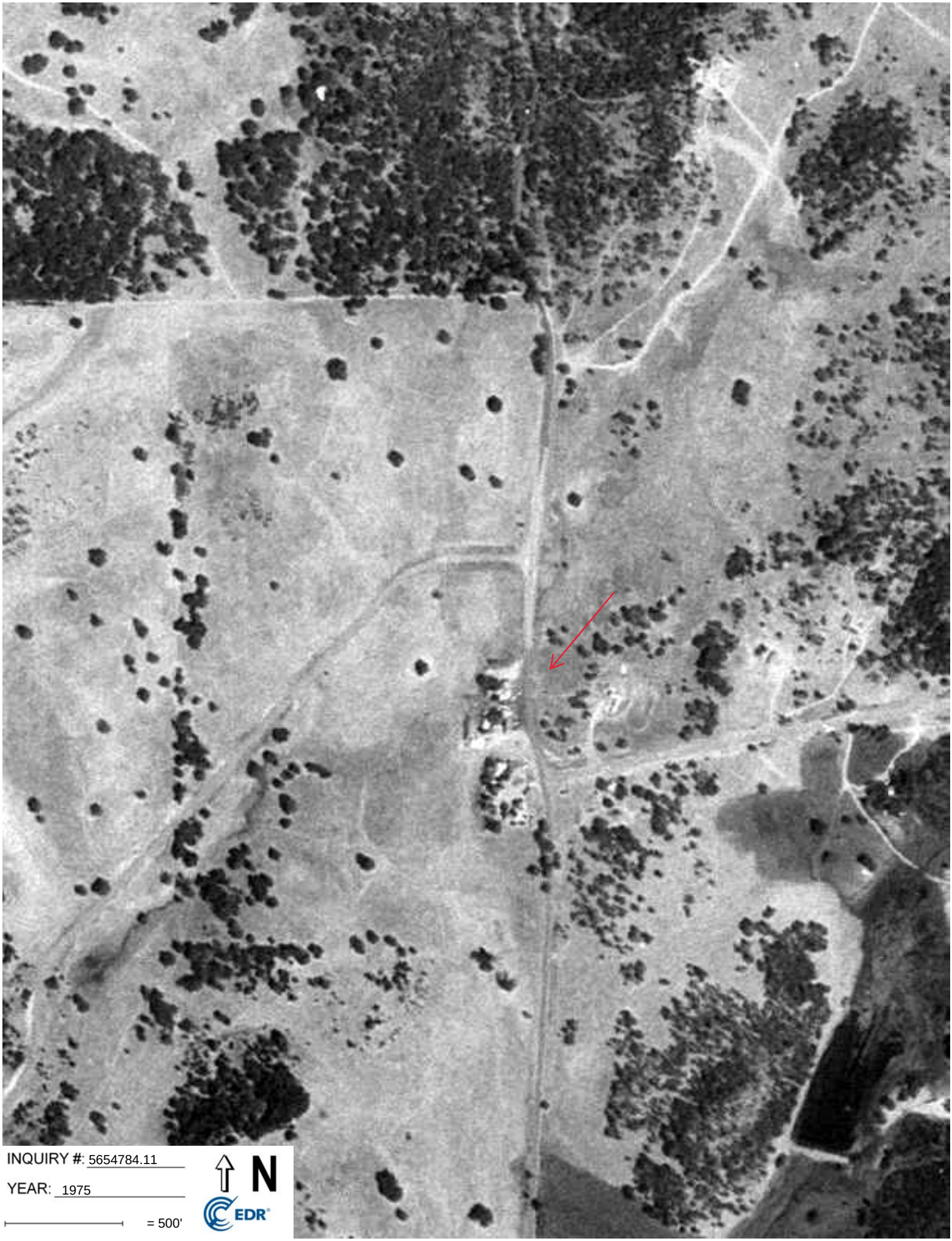
INQUIRY #: 5654784.11

YEAR: 1984

= 500'

N

EDR



INQUIRY #: 5654784.11

YEAR: 1975

= 500'

N

EDR

INQUIRY #: 5654784.11

YEAR: 1952

= 500'

N

EDR

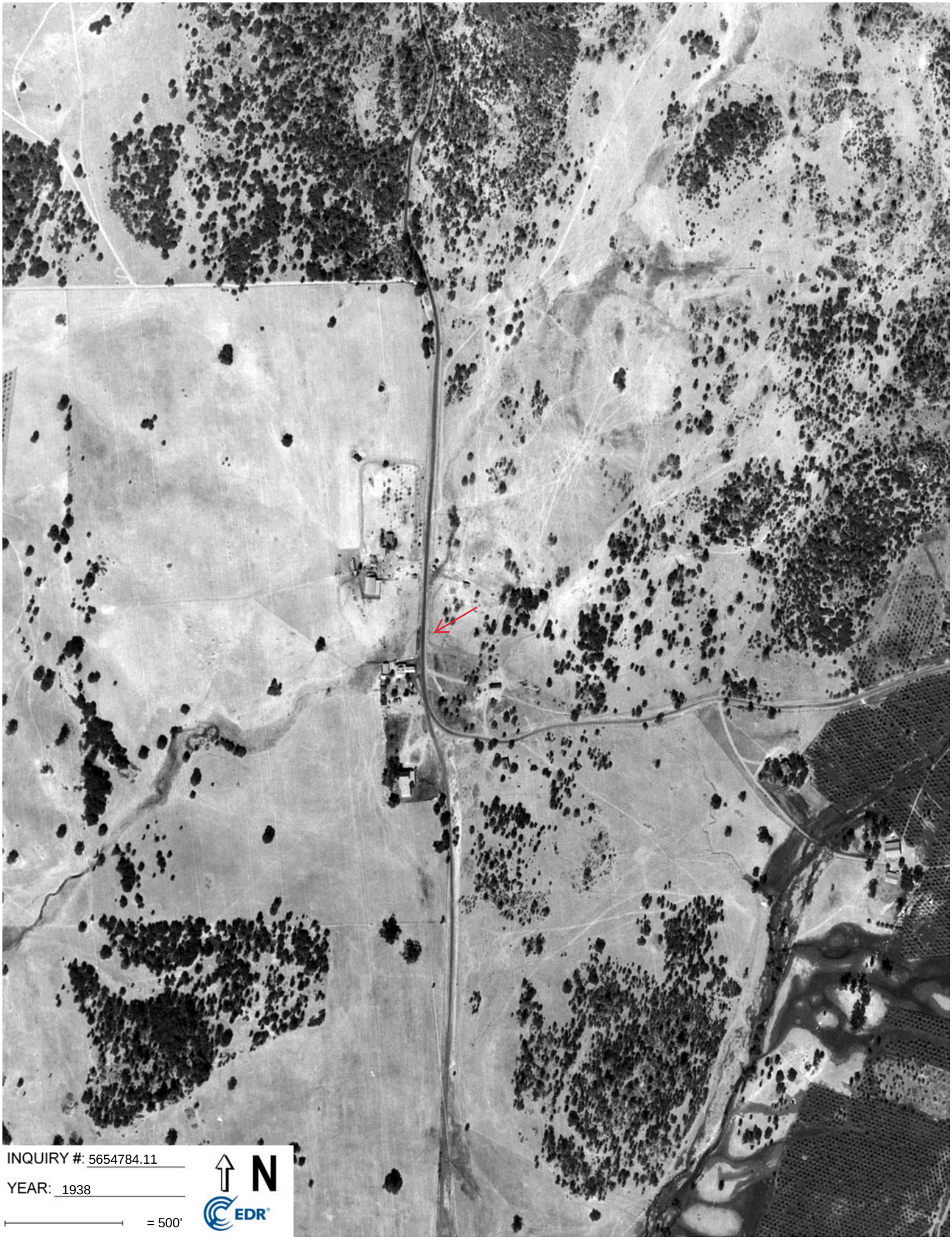
INQUIRY #: 5654784.11

YEAR: 1940

= 500'

N

EDR



INQUIRY #: 5654784.11

YEAR: 1938

= 500'

N

EDR

APN 071-500-037

1020 Northside Drive

Cool, CA 95614

Inquiry Number: 5654784.4

May 16, 2019

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

05/16/19

Site Name:

APN 071-500-037
1020 Northside Drive
Cool, CA 95614
EDR Inquiry # 5654784.4

Client Name:

Bole and Associates
6898 Penny Way
Brown Valley, CA 95918
Contact: David Bole

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Bole and Associates 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.# NA

Project: MHBA 0515-2019-3598

Coordinates:

Latitude:	38.888497 38° 53' 19" North
Longitude:	-121.015534 -121° 0' 56" West
UTM Zone:	Zone 10 North
UTM X Meters:	672115.13
UTM Y Meters:	4306274.78
Elevation:	1532.47' above sea level

Maps Provided:

2012	1891
1981	
1973	
1954	
1947, 1949	
1944	
1893	
1892	

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2019 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2012 Source Sheets

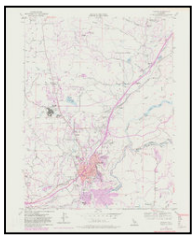
Greenwood
2012
7.5-minute, 24000

Coloma
2012
7.5-minute, 24000

Pilot Hill
2012
7.5-minute, 24000

Auburn
2012
7.5-minute, 24000

1981 Source Sheets



Auburn
1981
7.5-minute, 24000
Aerial Photo Revised 1978

1973 Source Sheets

Coloma
1973
7.5-minute, 24000
Aerial Photo Revised 1973

Greenwood
1973
7.5-minute, 24000
Aerial Photo Revised 1973

Auburn
1973
7.5-minute, 24000
Aerial Photo Revised 1973

Pilot Hill
1973
7.5-minute, 24000
Aerial Photo Revised 1973

1954 Source Sheets

Auburn
1954
15-minute, 62500
Aerial Photo Revised 1952

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1947, 1949 Source Sheets

AUBURN
1947
15-minute, 62500

Georgetown
1949
15-minute, 62500
Aerial Photo Revised 1946

1944 Source Sheets

Auburn
1944
15-minute, 62500

1893 Source Sheets

Placerville
1893
30-minute, 125000

Sacramento
1893
30-minute, 125000

1892 Source Sheets

Sacramento
1892
30-minute, 125000

Placerville
1892
30-minute, 125000

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

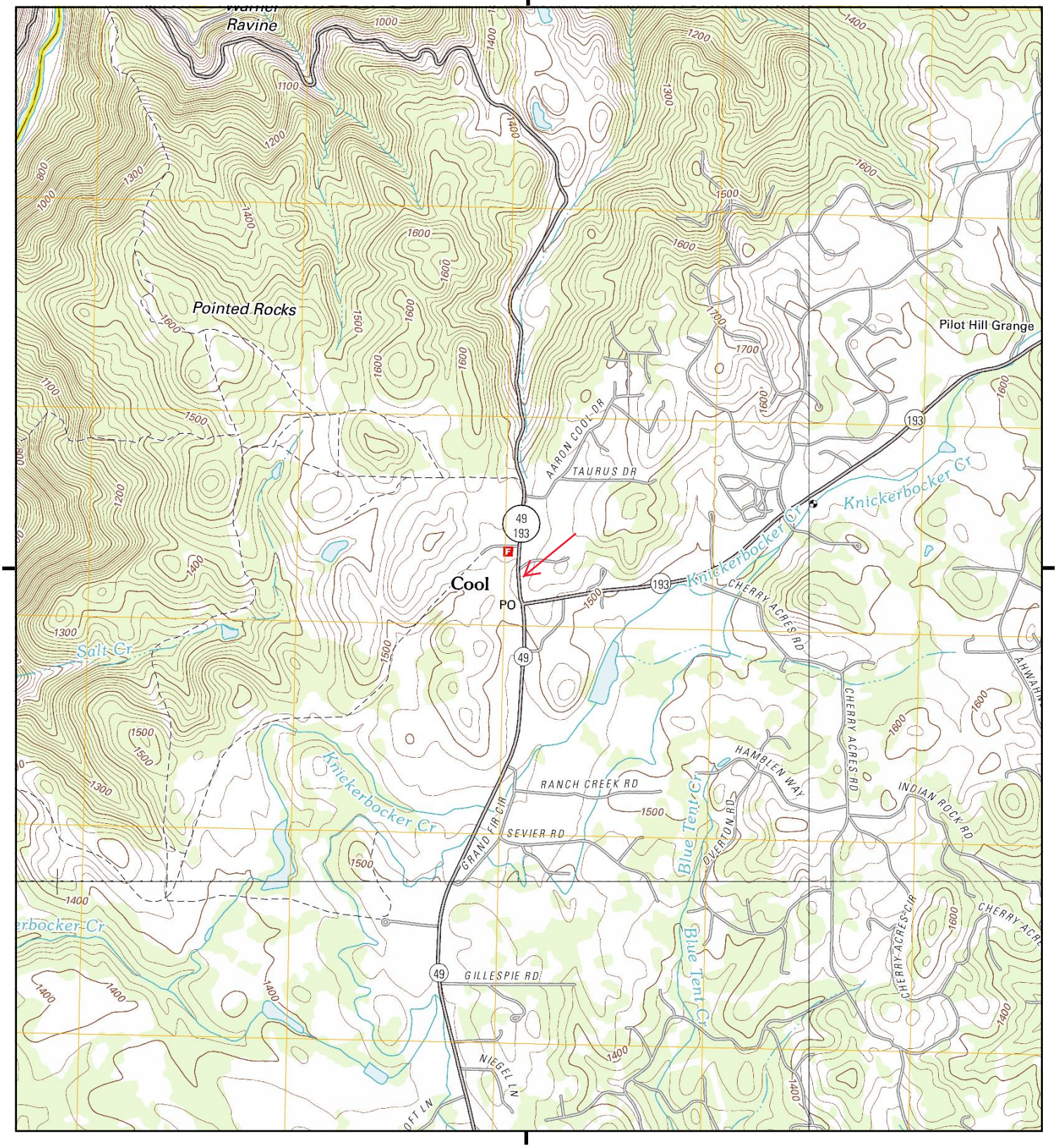
1891 Source Sheets

Placerville
1891
30-minute, 125000

Sacramento
1891
30-minute, 125000

Historical Topo Map

2012



This report includes information from the following map sheet(s).

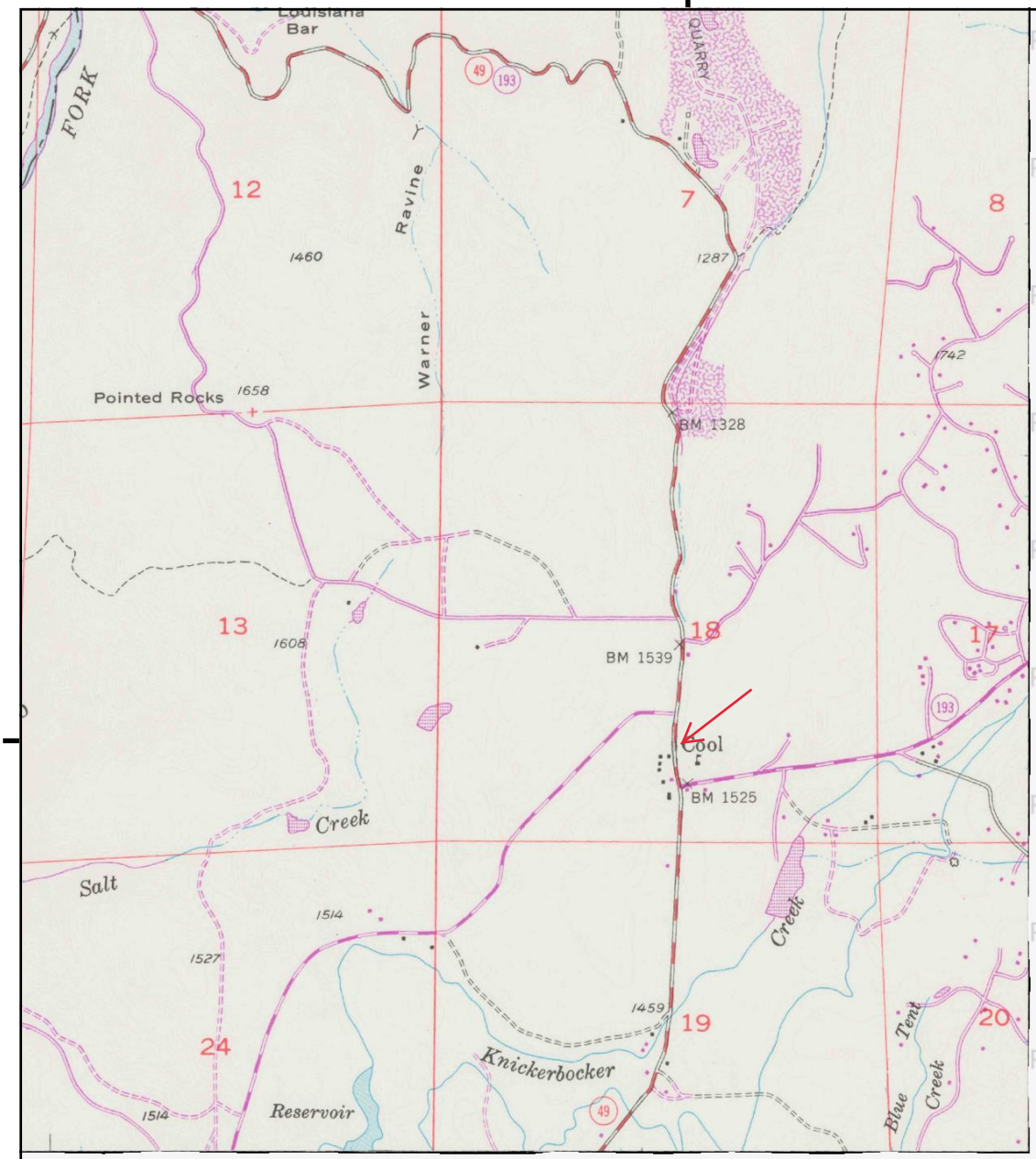
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Auburn, 2012, 7.5-minute
NE, Greenwood, 2012, 7.5-minute
SE, Coloma, 2012, 7.5-minute
SW, Pilot Hill, 2012, 7.5-minute

SITE NAME: APN 071-500-037
ADDRESS: 1020 Northside Drive
Cool, CA 95614
CLIENT: Bole and Associates

N



UNMAPPED

This report includes information from the following map sheet(s).

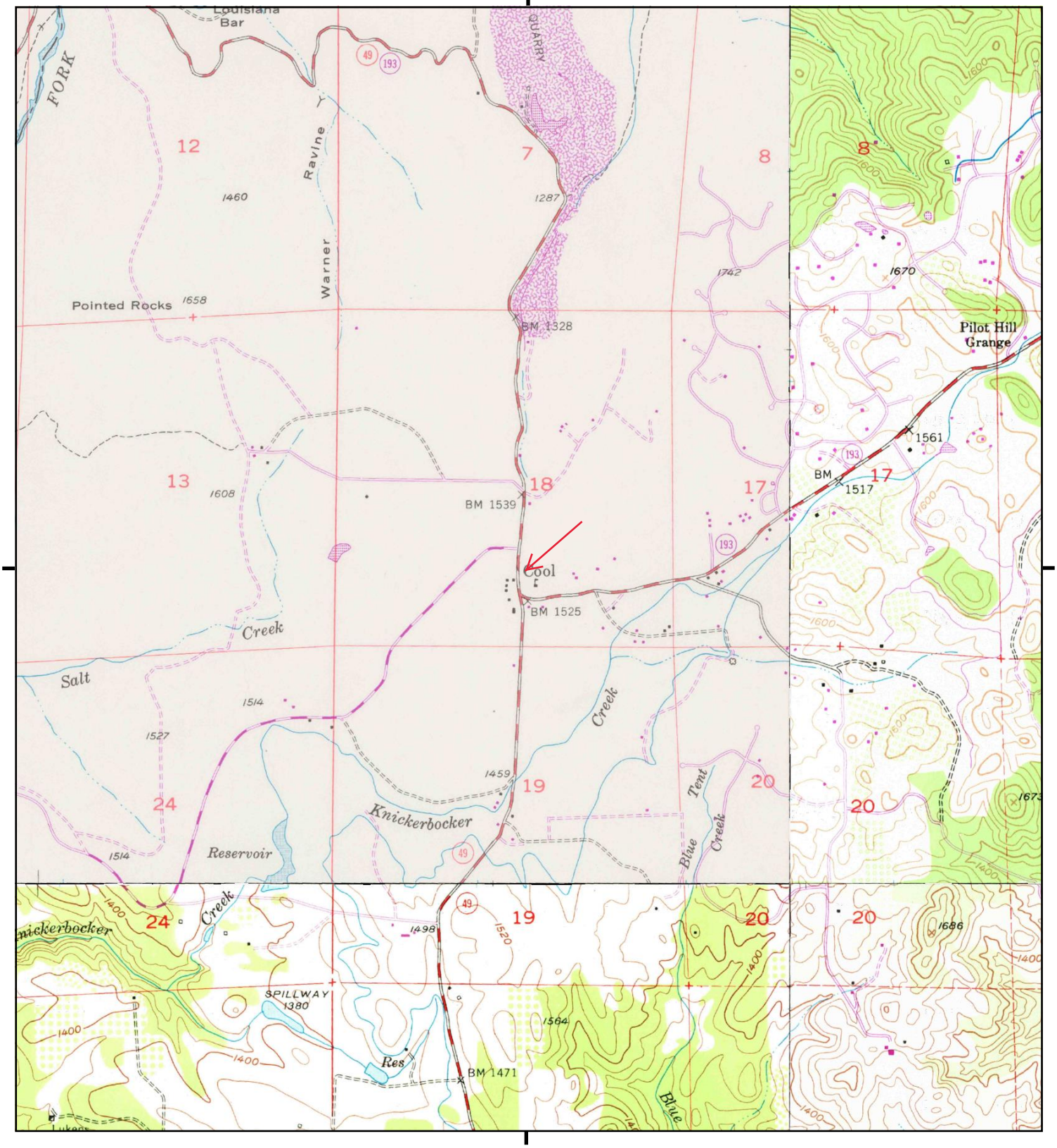
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Auburn, 1981, 7.5-minute

SITE NAME: APN 071-500-037
ADDRESS: 1020 Northside Drive
Cool, CA 95614
CLIENT: Bole and Associates

N



This report includes information from the following map sheet(s).

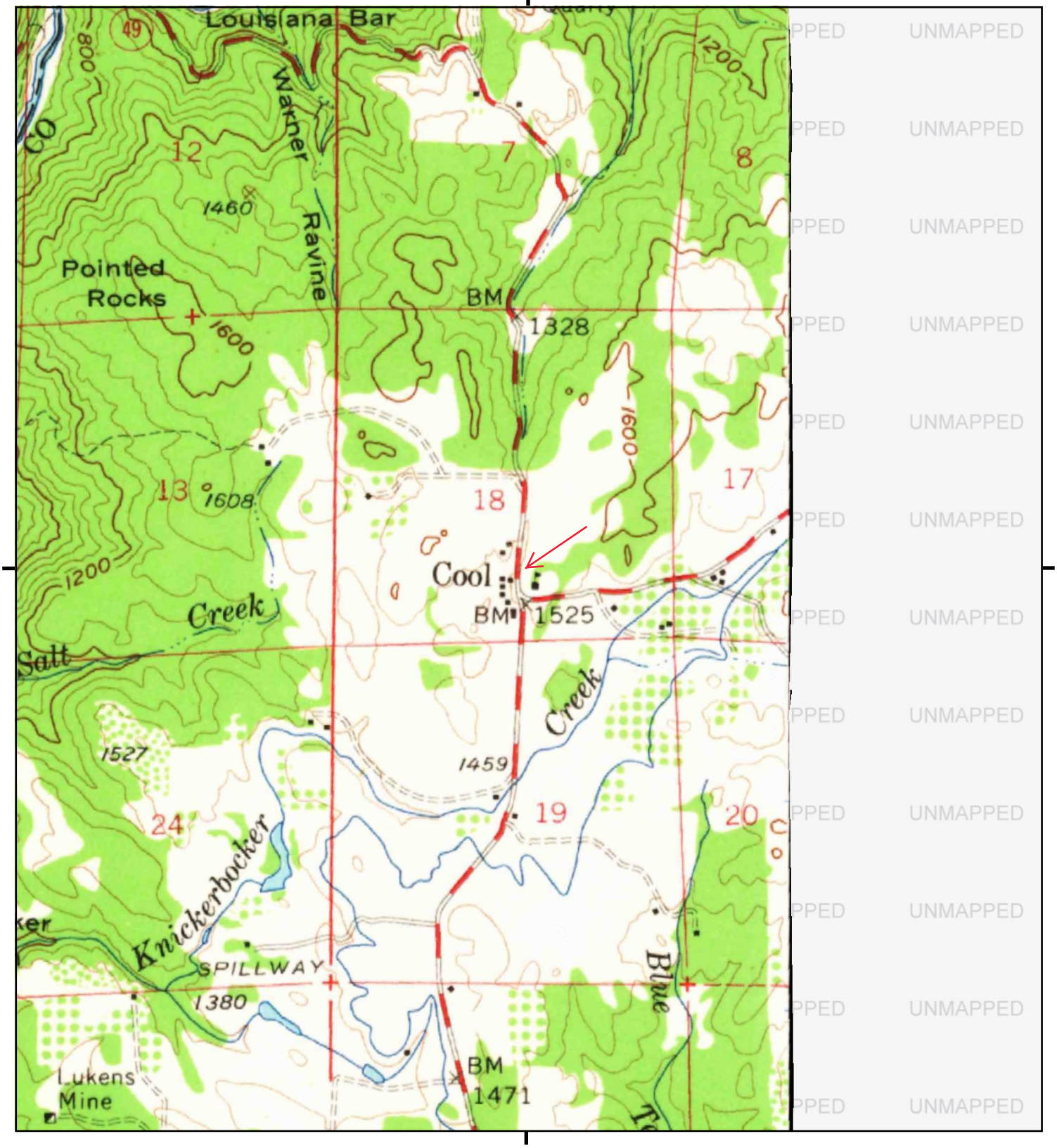
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Auburn, 1973, 7.5-minute
NE, Greenwood, 1973, 7.5-minute
SE, Coloma, 1973, 7.5-minute
SW, Pilot Hill, 1973, 7.5-minute

SITE NAME: APN 071-500-037
ADDRESS: 1020 Northside Drive
Cool, CA 95614
CLIENT: Bole and Associates

N



This report includes information from the following map sheet(s).

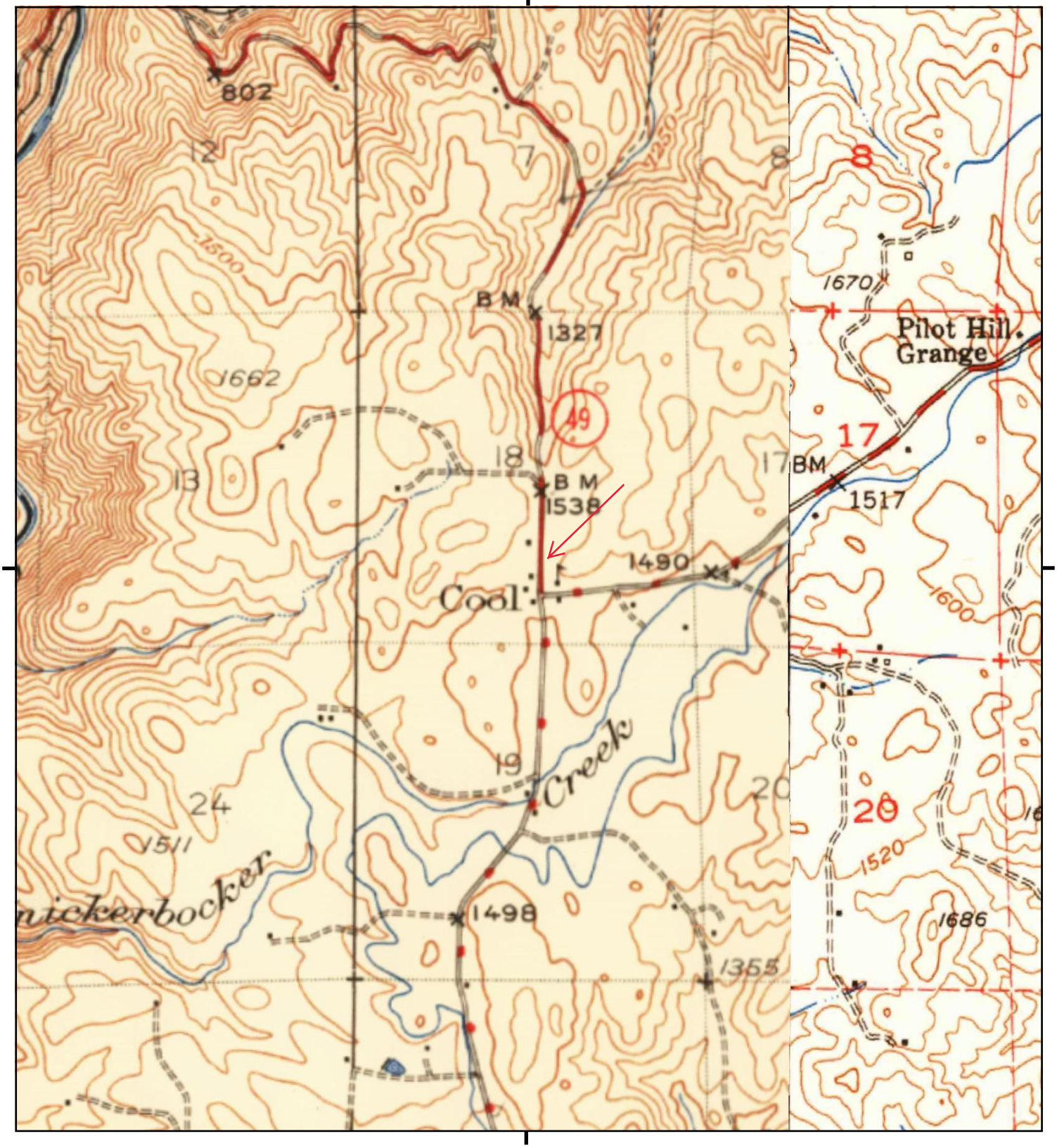
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Auburn, 1954, 15-minute

SITE NAME: APN 071-500-037
ADDRESS: 1020 Northside Drive
Cool, CA 95614
CLIENT: Bole and Associates

N



This report includes information from the following map sheet(s).

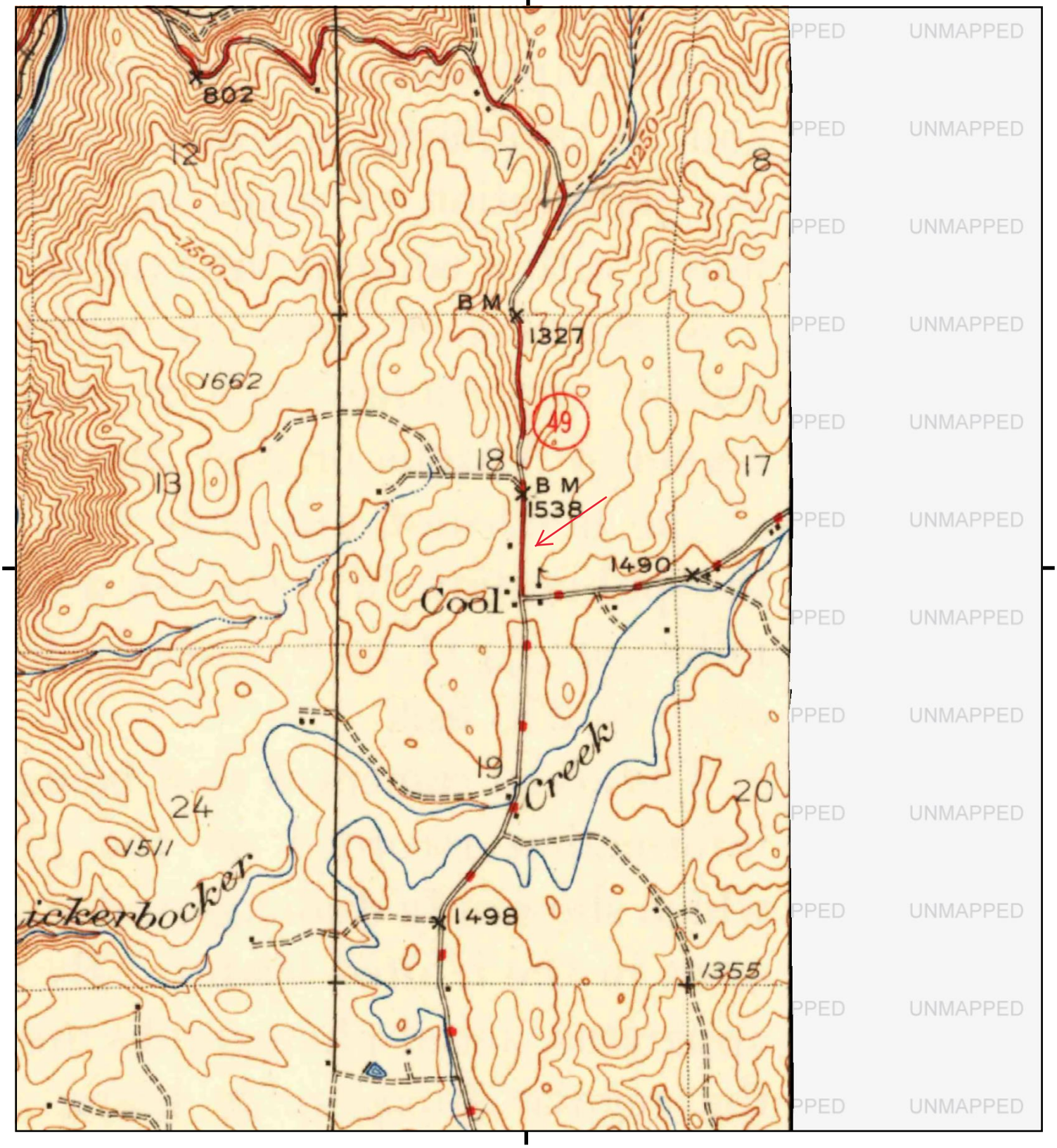
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, AUBURN, 1947, 15-minute
E, Georgetown, 1949, 15-minute

SITE NAME: APN 071-500-037
ADDRESS: 1020 Northside Drive
Cool, CA 95614
CLIENT: Bole and Associates

N



This report includes information from the following map sheet(s).

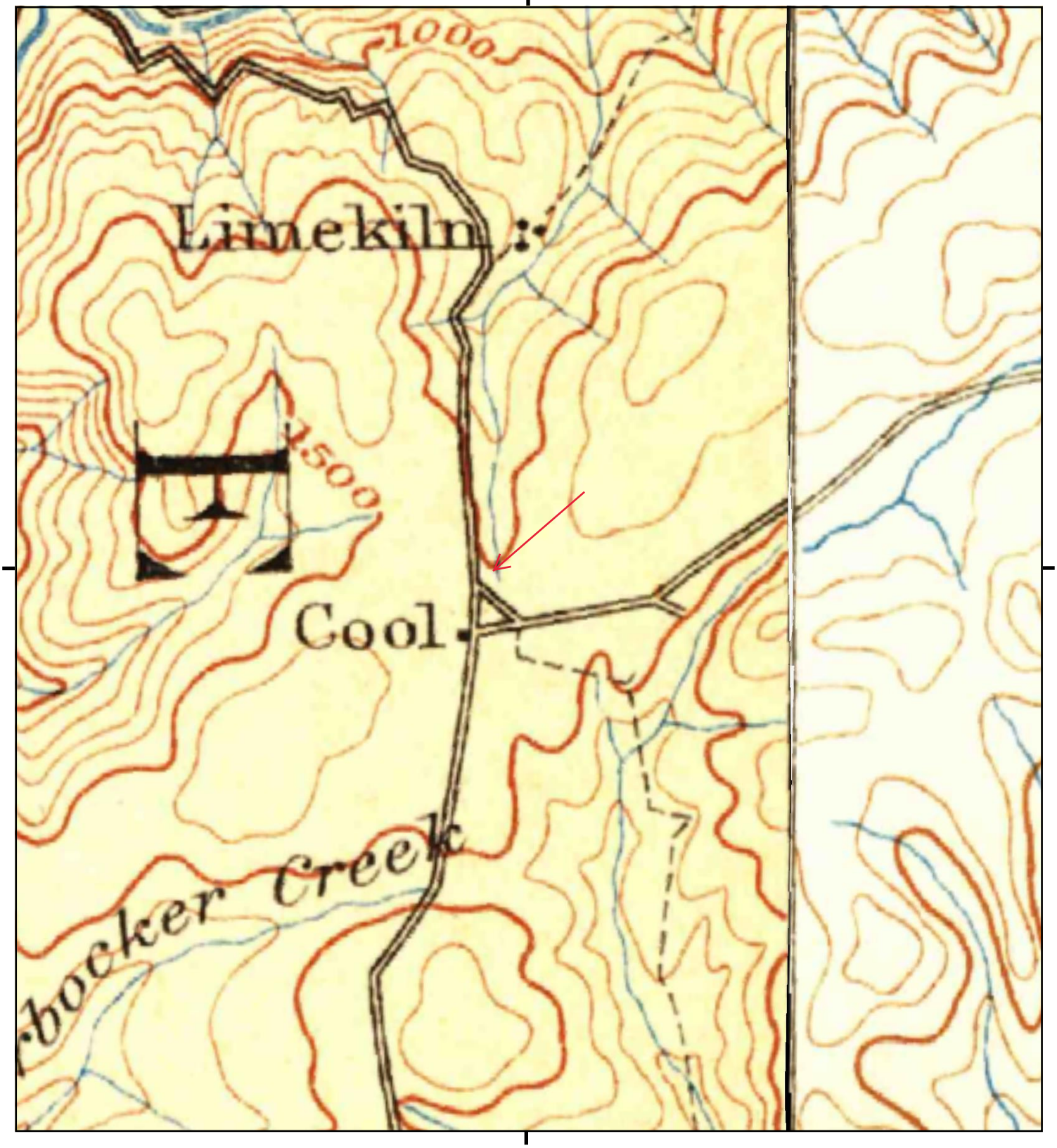
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Auburn, 1944, 15-minute

SITE NAME: APN 071-500-037
ADDRESS: 1020 Northside Drive
Cool, CA 95614
CLIENT: Bole and Associates

N



This report includes information from the following map sheet(s).

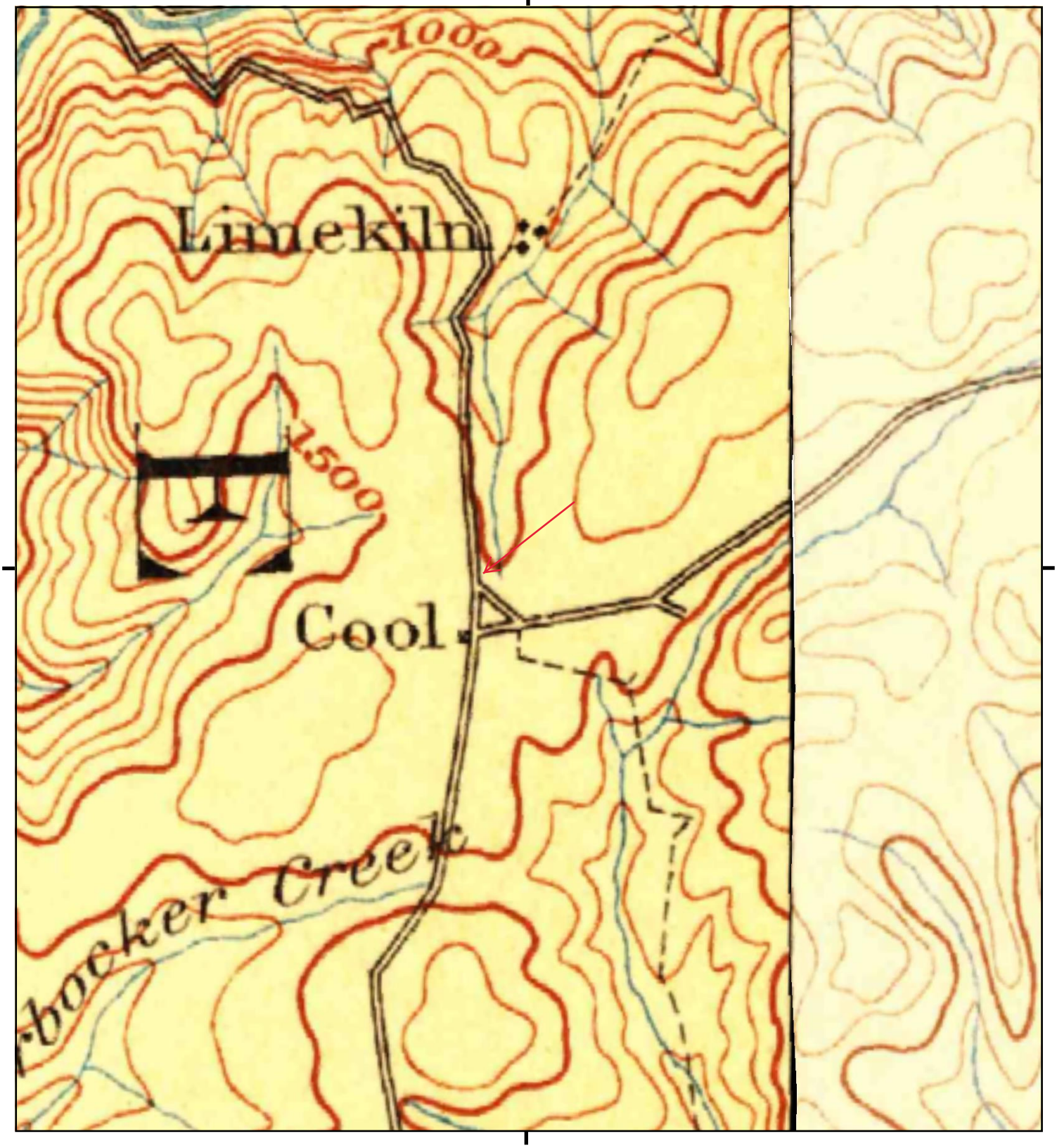
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Sacramento, 1893, 30-minute
SE, Placerville, 1893, 30-minute

SITE NAME: APN 071-500-037
ADDRESS: 1020 Northside Drive
Cool, CA 95614
CLIENT: Bole and Associates

N



This report includes information from the following map sheet(s).

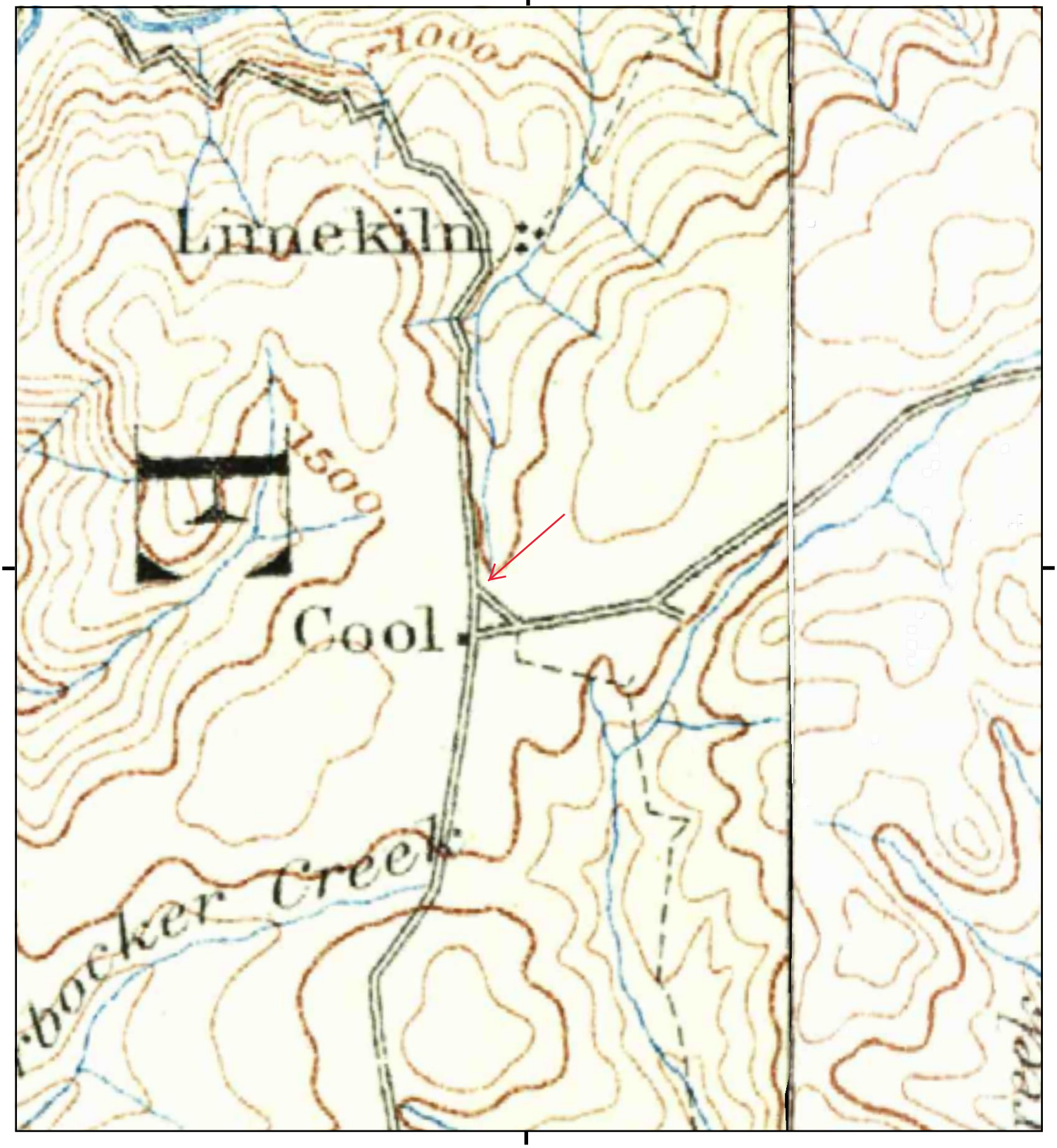
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Sacramento, 1892, 30-minute
SE, Placerville, 1892, 30-minute

SITE NAME: APN 071-500-037
ADDRESS: 1020 Northside Drive
Cool, CA 95614
CLIENT: Bole and Associates

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
SE, Placerville, 1891, 30-minute

SITE NAME: APN 071-500-037
ADDRESS: 1020 Northside Drive
Cool, CA 95614
CLIENT: Bole and Associates

N

APN 071-500-037

1020 Northside Drive

Cool, CA 95614

Inquiry Number: 5654784.3

May 16, 2019

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

05/16/19

Site Name:

APN 071-500-037
1020 Northside Drive
Cool, CA 95614
EDR Inquiry # 5654784.3

Client Name:

Bole and Associates
6898 Penny Way
Brown Valley, CA 95918
Contact: David Bole

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Bole and Associates 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 # 069A-4AA5-84D0

PO # NA

Project MHBA 0515-2019-3598

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 #: 069A-4AA5-84D0

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™

Limited Permission To Make Copies

Bole and Associates (the client) is permitted to make up to FIVE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2019 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

APN 071-500-037
1020 Northside Drive
Cool, CA 95614

Inquiry Number: 5654784.6
May 16, 2019

The EDR Property Tax Map Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

EDR Property Tax Map Report

Environmental Data Resources, Inc.'s EDR Property Tax Map Report is designed to assist environmental professionals in evaluating potential environmental conditions on a target property by understanding property boundaries and other characteristics. The report includes a search of available property tax maps, which include information on boundaries for the target property and neighboring properties, addresses, parcel identification numbers, as well as other data typically used in property location and identification.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

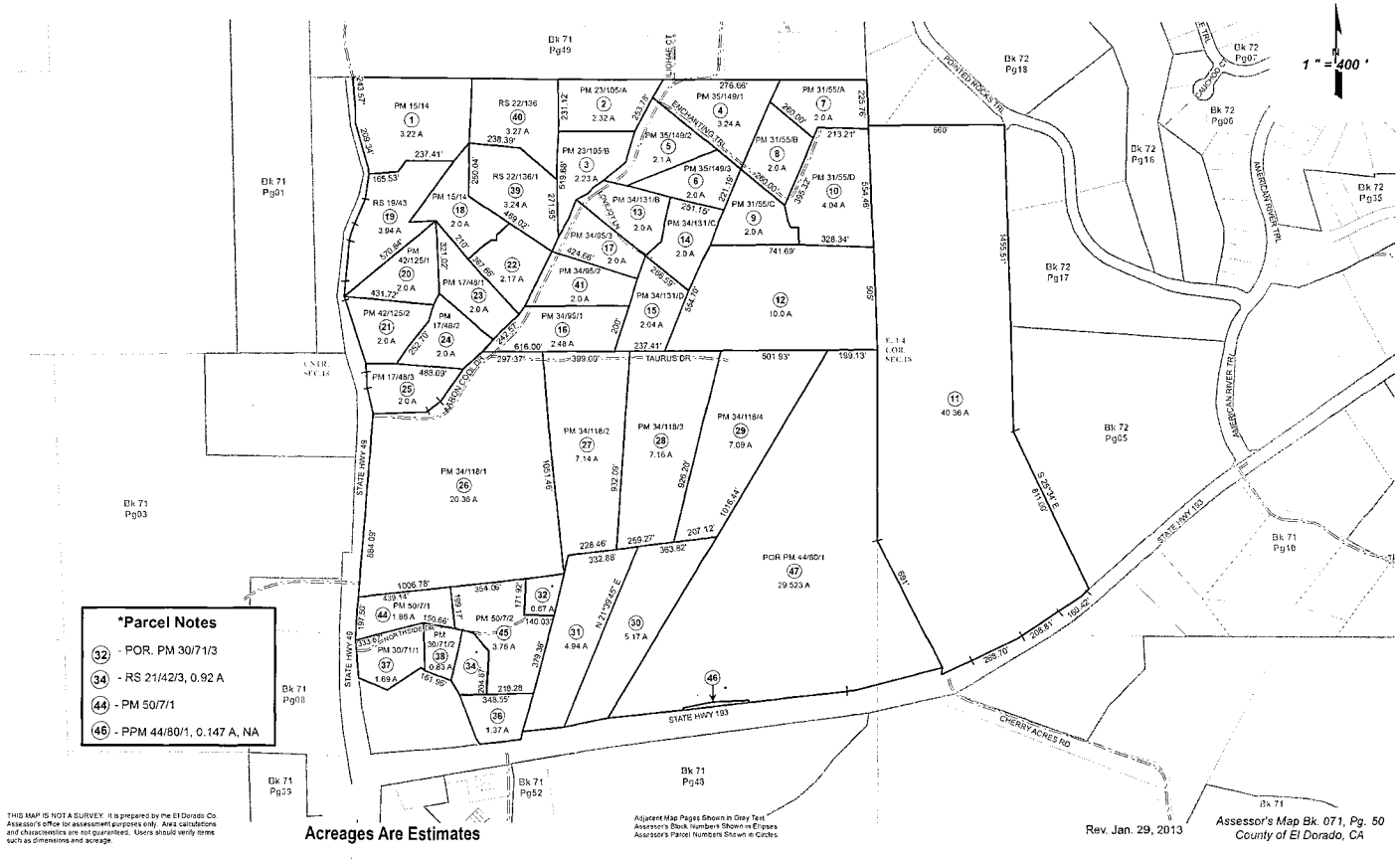
This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction orforecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2017 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc. or its affiliates is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

POR. SECS. 17 & 18, T.12N., R.9E., M.D.M.

71:50



APN 071-500-037
1020 Northside Drive
Cool, CA 95614

Inquiry Number: 5654784.8
May 16, 2019

EDR Building Permit Report

Target Property and Adjoining Properties

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

EDR Building Permit Report: Search Documentation

5/16/19

Site Name:
APN 071-500-037
1020 Northside
Cool, CA 95614

Client Name:
Bole and Associates
6898 Penny Way
Brown Valley, CA 95918

EDR Inquiry # 5654784.8

Contact: David Bole

Search Documentation

DATA GAP

The complete collection of Building Permit data available to EDR has been searched, and as of 5/16/19, EDR does not have access to building permits in the city where your target property is located (Cool, CA).

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED ORIMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THEMAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALLRISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OFERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL,INCIDENTAL CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLYLIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risklevels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providingany facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by anenvironmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to beconstrued as legal advice.

Copyright 2017 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

EDR BUILDING PERMIT REPORT

About This Report

The EDR Building Permit Report provides a practical and efficient method to search building department records for indications of environmental conditions. Generated via a search of municipal building permit records gathered from more than 1,600 cities nationwide, this report will assist you in meeting 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 1527-13), or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

Building permit data can be used to identify current and/or former operations and structures/features of environmental concern. The data can provide information on a target property and adjoining properties such as the presence of underground storage tanks, pump islands, sumps, drywells, etc., as well as information regarding water, sewer, natural gas, electrical connection dates, and current/former septic tanks.

ASTM and EPA Requirements

ASTM E 1527-13 lists building department records as a "standard historical source," as detailed in § 8.3.4.7: "Building Department Records - The term building department records means those records of the local government in which the property is located indicating permission of the local government to construct, alter, or demolish improvements on the property." ASTM also states that "Uses in the area surrounding the property shall be identified in the report, but this task is required only to the extent that this information is revealed in the course of researching the property itself."

EPA's Standards and Practices for All Appropriate Inquires (AAI) states: "§312.24: Reviews of historical sources of information. (a) Historical documents and records must be reviewed for the purposes of achieving the objectives and performance factors of §312.20(e) and (f). Historical documents and records may include, but are not limited to, aerial photographs, fire insurance maps, building department records, chain of title documents, and land use records."

Methodology

EDR has developed the EDR Building Permit Report through our partnership with BuildFax, the nation's largest repository of building department records. BuildFax collects, updates, and manages building department records from local municipal governments. The database now includes 30 million permits, on more than 10 million properties across 1,600 cities in the United States.

The EDR Building Permit Report comprises local municipal building permit records, gathered directly from local jurisdictions, including both target property and adjoining properties. Years of coverage vary by municipality. Data reported includes (where available): date of permit, permit type, permit number, status, valuation, contractor company, contractor name, and description.

Incoming permit data is checked at seven stages in a regimented quality control process, from initial data source interview, to data preparation, through final auditing. To ensure the building department is accurate, each of the seven quality control stages contains, on average, 15 additional quality checks, resulting in a process of approximately 105 quality control "touch points."

For more information about the EDR Building Permit Report, please contact your EDR Account Executive at (800) 352-0050.

EDR® Environmental Data Resources Inc

BUILD FAX PROPERTY HISTORY

APN 071-500-037
1020 Northside Drive
Cool, CA 95614

Inquiry Number: 5654784.5
May 17, 2019

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction orforecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2017 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc. or its affiliates is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

EXECUTIVE SUMMARY

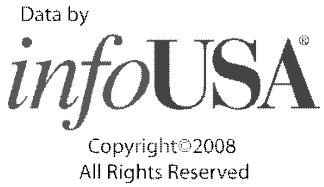
DESCRIPTION

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 city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

EDR is licensed to reproduce certain City Directory works by the copyright holders of those works. The purchaser of this EDR City Directory Report may include it in report(s) delivered to a customer. Reproduction of City Directories without permission of the publisher or licensed vendor may be a violation of copyright.



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
2014	☑	☑	EDR Digital Archive
2010	☑	☑	EDR Digital Archive
2005	☑	☑	EDR Digital Archive
2000	☑	☑	EDR Digital Archive
1995	☑	☑	EDR Digital Archive
1992	☑	☑	EDR Digital Archive
1989	☑	☑	Haines Criss-Cross Directory
1985	☑	☑	Haines Criss-Cross Directory
1980	☐	☐	Haines Criss-Cross Directory
1974	☐	☐	Haines Criss-Cross Directory
1970	☐	☐	Haines Criss-Cross Directory

FINDINGS

TARGET PROPERTY STREET

1020 Northside Drive
Cool, CA 95614

Year	*CD Image*	*Source*	
NORTHSIDE DR			
2014	pg A1	EDR Digital Archive	
2010	pg A3	EDR Digital Archive	
2005	pg A5	EDR Digital Archive	
2000	pg A7	EDR Digital Archive	
1995	pg A9	EDR Digital Archive	
1992	pg A11	EDR Digital Archive	
1989	pg A13	Haines Criss-Cross Directory	
1985	pg A15	Haines Criss-Cross Directory	
1980	-	Haines Criss-Cross Directory	Street not listed in Source
1974	-	Haines Criss-Cross Directory	Street not listed in Source
1970	-	Haines Criss-Cross Directory	Street not listed in Source

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*	
STHY 49			
2014	pg. A2	EDR Digital Archive	
2010	pg. A4	EDR Digital Archive	
2005	pg. A6	EDR Digital Archive	
2000	pg. A8	EDR Digital Archive	
1995	pg. A10	EDR Digital Archive	
1992	pg. A12	EDR Digital Archive	
1989	pg. A14	Haines Criss-Cross Directory	
1985	pg. A16	Haines Criss-Cross Directory	
1980	-	Haines Criss-Cross Directory	Target and Adjoining not listed in Source
1974	-	Haines Criss-Cross Directory	Target and Adjoining not listed in Source
1970	-	Haines Criss-Cross Directory	Target and Adjoining not listed in Source

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

NORTHSIDE DR 2014

1020	CHAN SUK SHAN
	COOL MASSAGE THERAPY
	DOC FRYS
	HAPPY PALACE
	SMITH GREENWOOD ASSOCIATES
	UNITED STATES POSTAL SERVICE
1032	HIGHGHH, S
1061	COOL MINI STORAGE

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

STHY 49 2014

2966	ANIMAL MEDICAL CENTER
	ATTLEBERGER LORRIE LEE
	FULSTER RONDA FLORENCE
2968	CHERS HAIR SALON IN COOL
	COOL FEED & PET SUPPLY LLC
	COOL FLORIST
	JODY GRAY
	PON & CO
	ROSEMARY E BORBA
	ROSIES COOL TAQUERIA
	SUNIL DATT SHARMA
	TIMBERLINE REALTY INC
	TOMS SIERRA COMPANY INC
3006	ESSENTIAL SPIRIT MASSAGE & EST
	FORSBERG RIKARD C DDS
	MATTHEWS MORTGAGE INC
	PREMIER FOOTHILL PROPERTIES
	SCOTTS AUTOMOTIVE
	WGAS
	XPRESSIONS CATERING

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

NORTHSIDE DR 2010

1020	CALICO ROSE CORNER BOOK SHOPPE
	CHAN SUK SHAN
	COOL MASSAGE THERAPY
	DOC FRYS
	EVANS JANIE OD
	HAPPY PALACE
	SMITH GREENWOOD ASSOCIATES
	UNITED STATES POSTAL SERVICE
1032	HIGHGHH, S

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

STHY 49 2010

2966	ANIMAL MEDICAL CENTER
	ATTLEBERGER LORRIE LEE
	COOL CORNER VIDEO
	COOL CUTS
	MAIN ST CAFE AND GRILL
2968	BUCKS COOL FEED
	CHERS HAIR SALON IN COOL
	COOL DELI
	COOL FEED & PET SUPPLY LLC
	COOL FLORIST
	COOL PHYSICAL THERAPY
	DISHNETWORK
	MILESTONE SALOON
	NEETU SHARMA
	PON & CO
	ROSEMARY E BORBA
	SATELLITE
	SUNIL DATT SHARMA
	TIMBERLINE REALTY INC
	TOMS SIERRA COMPANY INC
3006	COOL CAFE
	COOL TAN
	ESSENTIAL SPIRIT MASSAGE & EST
	FORSBERG RIKARD C DDS
	L C COMMUNICATIONS
	MY GIRLFRIENDS CLOSET
	PREMIER FOOTHILL PROPERTIES
	REALTY WORLD
	SCOTTS AUTOMOTIVE
	STANAWAY COREY
	WGAS

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

NORTHSIDE DR 2005

1020	CALICO ROSE CORNER BOOK SHOPPE
	COOL BOOKKEEPING & TAX SERVICE
	COOL MASSAGE THERAPY
	DOC FRYS
	FRY MD MARION
	HAPPY PALACE
	UNITED STATES POSTAL SERVICE

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

STHY 49 2005

2966	ANIMAL MEDICAL CENTER
	COOL CORNER VIDEO
	COOL CUTS
	COOL LIONS CLUB & CANDY BARN
	MAIN ST CAFE AND GRILL
2968	BUCKS COOL FEED
	COOL DELI
	COOL FEED & PET SUPPLY LLC
	COOL FLORIST
	MATHEWS MORTGAGE
	PON & CO
	ROSEMARY E BORBA
	TIMBERLINE REALTY INC
	TOMS SIERRA CO INC
2976	CHERS HAIR SALON IN COOL
3006	A TO Z WHOLESALE HOUSE
	BOBS FOREIGN & DOM AUTO SVC
	COOL NAILS
	EVANS JANIE OD
	FORSBERG RIKARD C DDS
	L C COMMUNICATIONS
	MASONS COOL FLOOR STORE
	NORTH FORK MANAGEMENT INC
	NUGGET RESTAURANT 2
	TOWN & COUNTRY HAIR SALON

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

NORTHSIDE DR 2000

1020 COOL COMPUTERS
DIVIDE FAMILY CHIROPRACTIC
HAPPY PALACE
UNITED STATES POSTAL SERVICE

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

STHY 49 2000

2966	ANIMAL MEDICAL CENTER
	COOL CORNER VIDEO
	COOL CUTS
	MAIN STREET PIZZARIA & GRILL
2968	COOL FEED & PET SUPPLY LLC
	GEORGETOWN DIVIDE RECREATION
	MATHEWS MORTGAGE
	MILESTONE SALOON
	PON & CO
	TOMS SIERRA CO INC
2976	CHERS HAIR SALON IN COOL
3006	COOL NAILS
	FORSBERG RIKARD C DDS
	MARSH INSURANCE AGENCY

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

NORTHSIDE DR 1995

1020	BURTCH LORI ENTERPRISES
	DIVIDE FAMILY CHIROPRACTIC
	NORTHSIDE DEVELOPMENT
	PRECISION BUILT CONSTRUCTION
	ROEDIGER RANDY DENNIS KEENE
	THE HAPPY PALACE
	U S COMPUTER WORKS INC
	UNITED STATES POSTAL SERVICE

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

STHY 49 1995

2966	BUSBY PENNY L
	CARPENTER ANTHONY
	COOL ANIMAL HOSPITAL
	COOL CORNER VIDEO
	HOWARD CALVIN
	PURPLE IRIS
2968	BLUE MOON ANTIQUES
	DAVES CARPET CENTER
	MC CRELLIAS KATHIE
	PON & CO
	SEGARRAS BLUE MOON ANTIQUES
2976	CHERS HAIR SALON IN COOL
3000	NORTHSIDE ELEMENTARY SCHOOL
3006	FORSBERG RIKARD C DDS

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

NORTHSIDE DR 1992

1020 GLEASON, DAVID

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

STHY 49 1992

2966	C & K CONSTRUCTION
	COOL CORNER VIDEO
	PURPLE IRIS
2968	A & M DELI SANDWICHES
	DAVES CARPET CENTER
	SEGARRAS BLUE MOON ANTIQUES
	WALKING WOLF TRADING COMPANY
3000	NORTHSIDE ELEMENTARY SCHOOL
3006	FINISHING TOUCH
	V L LABORATORIES

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

NORTHSIDE DR 1989

NORTHSIDE DR (84)
95614 COOL

1020	*CHIROPRACTOR COOL	823-2399	7
	*COOL CHIROPRACTIC	823-2399	
	*COOL DIVIDE VIDEO	823-3231	8
	*DIVIDE FMLY CHIRO	823-2399	7
	*FAMILY CHIROPRACTIC	823-2399	7
	*GLEASON DAVID	823-2399	7

Y HAINES & CO., INC.

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

STHY 49 1989

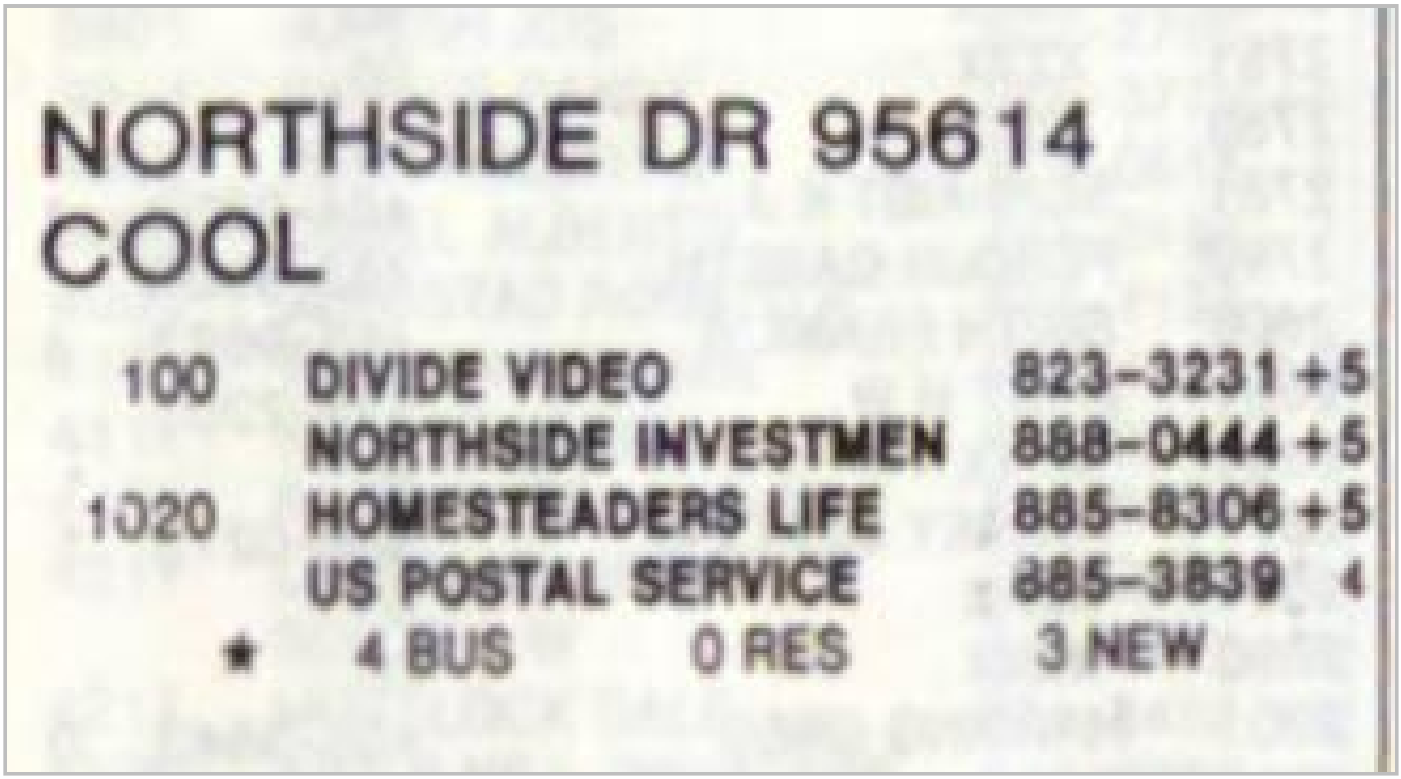
HWY 49 95614 COOL

2976	★COOL CORNER	888-8077	6
	★COOL GENERAL STORE	885-4020	2
2978	★CORNERSTONE HOMES	888-6418	+9
3006	XXXX	00	
3261	LOVEJOY Stanley	885-4695	8
	MCGRATH Thomas D	823-5060	8
3300	XXXX	00	
3321	DULANY Donald	885-8245	6
3401	CORBETT Jack W	823-1116	2
3481	NIEGEL A M	823-0104	8
	NIEGEL J M	823-0104	
3602	★AYERS STAN	823-2314	8
	★COOL DELI THE	823-2314	8
3660	★BOB MOORES AUTO SRV	823-6411	
NO #	★BLACK OAK SC NRTHSD	885-4079	8
NO #	★COOL CRAFTS CUPBRD	885-1114	
NO #	★COOL CUTIE THE	885-1272	
NO #	★COOL TEXACO	823-9000	
NO #	★COOL TRUE VALUE FRM	885-1264	
NO #	★CRAZY RAYS TEXACO	823-9000	7
NO #	★ELLINGHOUSE REALTY	823-7000	7
NO #	★FARMERS INS	885-0405	
NO #	FORD Clara	885-2313	0
NO #	FORD Jason C	885-2313	
NO #	★FORSBERG RIKARD DDS	888-6079	
NO #	HENDERSON Wm D	885-1566	4
NO #	★LORRAINES FOOD CO	885-9639	0
NO #	MCKINNEY Robt L	885-2259	8
NO #	★MILESTONE THE	885-8337	1
NO #	★NORTHSIDE FIRE PROT	885-1232	
NO #	★NORTHSIDE SCHOOL	885-4079	
NO #	★NUGGET THE	823-1294	6
NO #	★NUGGETT PIZZA	885-3693	5
NO #	PIERROZ Henri	823-2771	
NO #	PIERROZ Kathy	823-3018	8
NO #	PIERROZ Larry	823-3018	
NO #	★PON&CO	823-1088	2
NO #	★REZAC NORM	885-0405	8
NO #	SIMON Pete	885-4240	7
NO #	SIMON Roberta	885-4240	
NO #	STARRITT Chas	885-1114	
NO #	STARRITT Marion	885-1114	
NO #	★SUNLAND DEVELOPMENT	823-1088	2
NO #	TOWNER Robt E	823-1946	
NO #	★TRUE VALUE FARM STR	885-1264	4
NO #	TUTTLE Louise	885-1648	8

★ 25 BUS 21 RES 1 NEW

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

NORTHSIDE DR 1985



NORTHSIDE DR 95614
COOL

100	DIVIDE VIDEO	823-3231 +5
	NORTHSIDE INVESTMEN	888-0444 +5
1020	HOMESTEADERS LIFE	885-8306 +5
	US POSTAL SERVICE	885-3839 4

* 4 BUS 0 RES 3 NEW

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

STHY 49 1985

HWY 49 95614 COOL

2976	COOL GENERAL STORE	885-4020	2
3006	NUGGET LIQUOR STORE	823-2693	2
3261A	LOVEJOY STANLEY R	885-4695	3
B	STEVES FREDA	823-1258	+5
3300	XXXX	00	
3401	CORBETT JACK W	823-1116	2
3481	NIEGEL ORA	885-2573	3
3602	CARLSON PANSY C	823-2314	3
	COOL DELI THE	823-2314	
3670	XXXX	00	
4460	ONSTOTT O C	885-8950	+5
NO #	BAYLEY HOUSE THE	888-7281	4
NO #	BELL JAS	885-1333	
NO #	BINGHAM J I DVM	823-2417	8
NO #	CATE HENRY P SR	885-4240	
NO #	COOL CRAFTS CUPBRD	885-1114	9
NO #	COOL CUTIE THE	885-1272	
NO #	COOL TRUE VLU STORE	885-1264	8
NO #	DULANY DONALD	885-8245	9
NO #	ELLINGHOUSE REALTY	823-7000	9
NO #	FORD JASON C	885-2313	2

APPENDIX E: QUALIFICATIONS

MR. DAVID BOLE, ENVIRONMENTAL PROFESSIONAL

BOLE AND ASSOCIATES STATEMENT OF QUALIFICATIONS

Bole and Associates

An Environmental Consulting Firm

Environmental Site Assessments **Biological & Botanical Studies**

Threatened & Endangered Species **Wildlife Surveys & Evaluations**

Wetland Delineations & Permits **SWPPP Developer/Practitioner**

Bole and Associates is a professional environmental consulting firm that specializes in property characterization and assessment. Our team of experts pioneered the integration of biology, hydrology, engineering, architecture, and subsurface interface radar to become a leader in innovative site resource evaluation and restoration. Drawing upon our broad experience and expertise we have become a leader in providing evaluation, planning, design, and permitting services to clients in both private and public sectors. Our environmental science staff scientists provide expert CEQA/NEPA Environmental Assessments, Initial Studies, Biological Inventories, Wetland Delineations, and Phase I Environmental Site Assessments in accordance with the latest ASTM Standards, Federal AAI Requirements, and Small Business Administration Procedures. Marcus H. Bole and David H. Bole, Principals, have over 50 years of experience with environmental project management. The State of California has designated Bole and Associates a Disabled Veteran Small Business Enterprise (DVBE # 0000847) and the Department of Veterans Affairs has designated Bole and Associates as a Service Disabled Veteran Owned Small Business (SDVOSB). The National Registry of Environmental Professionals (NREP) has designed Bole & Associates as Registered Environmental Property Assessors.

104 Brock Drive, Wheatland CA 95692 (530) 633-0117 FAX (530) 633-0119, email: mbole@ aol.com
6898 Penny Way, Browns Valley CA 95918 (530) 415-6623 email: davidhbole@yahoo.com

OUR APPROACH

To meet or exceed our customers expectations by consistently providing high quality, timely and cost effective solutions to your environmental evaluation, planning, management, permitting, design and construction needs.

OUR NUMBER ONE GOAL
IS
SATISFIED CUSTOMERS

Your project will be done right the first time.

Work will be performed by professionals familiar with your requirements.

We will communicate with you during all phases of the project and keep you informed of all important events.

We guarantee compliance with all applicable laws and regulations.

You will be completely satisfied with the quality of our work 100% of the time.

PROFESSIONAL AND COMMUNITY PARTICIPATION

In keeping with our commitment to build our profession and our community, BOLE & ASSOCIATES participate in the following organizations:

American Society for Testing and Materials

Association of Official Analytical Chemists

Association of Environmental Professionals

Beale Air Force Base Restoration Advisory Board

Beale Military Liaison Committee (BMLC)

California Stormwater Quality Association

California Construction General Permit Training Team

Institute of Inspection, Cleaning and Restoration Certification

International Society of Arboriculture

International Society of Indoor Air Quality and Climate

National Geographic Society

National Registry of Environmental Professionals (NREP)

Northern California Society of Environmental Professionals

Redbud Chapter, California Native Plant Society

Society for California Archaeology

Society of American Foresters

Society for Ecological Restoration

The Association for Service Disabled Veterans

Yuba/Sutter Economic Development Committee

ENVIRONMENTAL CONSULTING FIRM PROFILE
KEY PERSONNEL & ASSOCIATES

Marcus H. Bole - *Principal Environmental Scientist and co-founder of BOLE & ASSOCIATES. Mr. Bole is a graduate of North Dakota State University, Fargo, North Dakota with a Master of Science in Environmental Science. He holds a Bachelors Degree in Social Science / Geography from California State University, Sacramento. After a twenty-three year career in the United State Air Force, Lt. Colonel Bole retired from Beale Air Force Base in 1993, his last assignment being Chief, Environmental Management for a 23,000 acre federal military installation. An U. S. Army Corps of Engineers trained and certified wetland delineator, the National Registry of Environmental Professionals (NREP) has certified Mr. Bole as a Registered Environmental Property Assessor. The State of California Department of General Services has designated Mr. Bole as a Disabled Veteran Business Enterprise (DVBE # 0000847). The Veterans Administration has designated Mr. Bole as a Service Disabled Veteran Owned Small Business (SDVOSB).*

Charlene J. Bole – *Environmental Scientist, Chief Executive Officer and co-founder of BOLE & ASSOCIATES. Ms. Bole is a graduate of North Dakota State University, Fargo, North Dakota with a Master of Science in Environmental Science. She holds a Bachelor of Arts in Social Science from California State University, Sacramento. Ms. Bole has over twenty-five years of experience in project management, educational consulting, and classroom instruction. A recognized expert in research development and management, she has supervised work forces of professional educators, government officers and technicians responsible for a wide array of environmental issues. The National Registry of*

Environmental Professionals (NREP) has certified Ms. Bole as a Registered Environmental Property Assessor.

David H. Bole – *Environmental Scientist, Biologist & Wildlife Specialist. David joined Bole & Associates in 199 and became a Principal in 2012. He holds a Bachelor of Science in Biology from California State University, Long Beach. Mr. Bole has extensive experience in research & project management of exotic animals, including rare birds and reptiles. He specializes in the threatened and endangered plant and animal species of California. The National Registry of Environmental Professionals (NREP) has certified Mr. Bole as a Registered Environmental Property Assessor. With over 12 years of experience as an environmental scientist, David has completed over 200 Phase I and Transaction Screens throughout California.*

Skye A. Bole: *Environmental Scientist and co-founder of Bole & Associates. Skye joined BOLE & ASSOCIATES in 2010. Ms. Bole holds a Bachelor of Science from California State University, Sacramento. Ms. Bole has experience in research and project management. She specializes in Environmental Site Assessments and is a certified wetland delineator (Certificate #6424).*

James A. Gibson – *Certified Asbestos Consultant. Jim brings over twenty years of environmental management of hazardous materials experience to B&A. A State of California Certified Asbestos Consultant (CAC) and Site Surveillance Technician (SST), Jim performs all our asbestos inspections and testing in compliance with local, state and federal asbestos regulations. An American Indoor Air Quality Council, Certified Microbial Investigator (CMI), he conducts all mold and bio-hazard inspections and testing in accordance with the highest*

industry standards. B&A specializes in the evaluation of water/fire damaged structures, pre-demolition asbestos surveys, asbestos operations and maintenance plans, and indoor air quality investigations.

Thomas Nicholson – *Licensed General Contractor, structural building defects investigator, geophysical and Subsurface Investigations. Thomas Nicholson is founder of Sierra Nevada GSI, a leading environmental consulting firm specializing in ground penetrating radar (subsurface) investigations. Thomas joined BOLE and ASSOCIATES in 2007 and has held a State of California General Contractor's license since 1978. An expert in all phases of construction, he has investigated structural defects for numerous insurance companies including the California State Automobile Association, Allstate, Farmers, State Farm and the Kemper Insurance companies. Thomas has conducted investigations into the presence of underground petroleum storage tanks (USTs), hazardous waste dump sites, burial grounds, post tension cables and rebar, and mining shafts and geological structures. He is certified by California OSHA as a utility locator.*

PROFESSIONAL REFERENCES

The following individuals may be contacted and can provide you with substantiation of BOLE & ASSOCIATES' technical knowledge, the quality of service provided and on-time delivery of products. We urge you to do so.

TMC Financing (SBA)
Jim Azevedo
3300 Douglas Blvd, Suite 270
Roseville, CA 95771
(916) 724-5002
Jim@tmcfinancing.com

American River Bank
Mary Billingsley
3100 Zinfandel Drive, Suite 450
Rancho Cordova, CA
(916) 231-6120
Mbillingsley@americanriverbank.com

Browns Valley Irrigation District
Walter Cotter, General Manager
P.O. Box 34860
Browns Valley, CA 95918
(530) 743-5703
Walter@bvid.org

Meagher & Tomlinson, Realtors
Bill Meagher, Partner
1007 Live Oak Blvd., # A-4
Yuba City, CA 95991
(530) 671-0000
Deal@wmmt.com

Community First Bank
Hinson Thomas
2250 Douglas Blvd., Ste 100
Roseville, CA 95661
(916) 724-2427
Hthomas@Community1bank.com

Roy Hastings & Associates
Roy Hastings
1765 Carson Road
Placerville, CA 95667
(916) 359-0626
roy@rlhastings.com

PROJECTS

Phase I and Transaction Screen Evaluations

The professional team at Bole & Associates has worked together for over twenty years on over 1,800 environmental projects located throughout California. This broad experience makes us one of the most diverse private groups of professionals in our field. We draw upon on in-house expertise in biology, botany, hydrology, forestry, and related fields of environmental science to provide planning, design, permitting, and construction services to both private and public sectors.

At Bole & Associates, project success depends on strong coordination between multiple professions; our work history illustrates this approach. To demonstrate how our experience might be helpful on your project, we have selected the following summaries of our work.

TMC Financing (Small Business Administration): *designed specifications and performed a Level one (Phase I) Environmental Liability Site Assessment, utilizing the "American Society for Testing and Materials" (ASTM 1527-05), AAI federal directives, and the Small Business Administration's Standard Operating Procedures 50-10 5 for the Shell Gas Station, 2556 Lake Tahoe Boulevard, South Lake Tahoe, California. The Phase I included: 1) an evaluation of the historic transfer of title, and regulatory agency information; 2) site inspection of the property to determine existence of possible sources of contamination; 3) an evaluation of possible contingent off-site liabilities; 4) an asbestos survey in accordance with Pacific Mutual's "Guidelines for Asbestos Surveys and O & M Programs", and 4) area/site maps. Point of contact: Jim Azevedo, 3300 Douglas Blvd, Suite 270, Roseville, CA 95661, phone: 916-724-5002, fax: 916-724-5039 and email: Jim@tmcfinancing.com . During the 2000 to 2013 time period conducted over 250 Phase I ESAs and Transactional Screen Analyses for Small Business Administration contracts.*

Meagher & Tomlinson: *designed specifications and performed a Level one (Phase I) Environmental Liability Site Assessment, utilizing the "American Society for Testing and Materials" (ASTM 1527-05), AAI federal directives, and the Small Business Administration's Standard Operating Procedures 50-10 (5) for the Canova Moving and Storage Company, 717 Bridge Street, Yuba City, California. The Phase I included: 1) an evaluation of the historic transfer of title, and regulatory agency information; 2) site inspection of the property to determine existence of possible sources of contamination; 3) an evaluation of possible contingent off-site liabilities; 4) an asbestos survey in accordance with Pacific Mutual's "Guidelines for Asbestos Surveys and O & M Programs", and 4) area/site maps. Point of contact: Bill Meagher, 1007 Live Oak Blvd., Suite A-4, Yuba City, California 95991, phone: 530-671-0000, fax: 530-671-2717 and email: deal@wmmt.com .*

Sunrise Bank of San Diego: *designed specifications and performed a Transactional Screen Process (TSP), utilizing the "American Society for Testing and Materials" (ASTM), and Small Business Administration's Standard Operating Procedures 50-10(4)(B) guidelines for the property located at 819 Bridge Street, Colusa, CA 95932. The TSP included: 1) an interview with property owners that included a comprehensive Environmental Questionnaire form asking specific environmentally related questions that*

requires a visual inspection to complete; 2) site inspection of the property to determine existence of possible sources of contamination; 3) an evaluation of possible contingent off-site liabilities; 4) an environmental records review conducted at appropriate regulatory agencies, and 4) area/site maps and photographs. Point of contact: Harmanjit S. Gosal, 1227 Bridge Street, Suite D, Yuba Cit, CA 95991, phone: 530-755-4413, fax: 530-755-3088 and email: Harman.Gosal@capitolbancorp.com .

Wells Fargo SBA Lending: *designed specifications and performed a Transactional Screen Process (TSP), utilizing the "American Society for Testing and Materials" (ASTM), and Small Business Administration's Standard Operating Procedures 50-10(4)(B) guidelines for the L&A Body Shop, 5031 Franklin Blvd., Sacramento, California. The TSP included: 1) an interview with property owners that included a comprehensive Environmental Questionnaire form asking specific environmentally related questions that requires a visual inspection to complete; 2) site inspection of the property to determine existence of possible sources of contamination; 3) an evaluation of possible contingent off-site liabilities; 4) an environmental records review conducted at appropriate regulatory agencies, and 4) area/site maps and photographs. Point of contact: Mary Norris, 1504 Eureka Road, Suite 370, Roseville, California 95661, phone: 916-780-7054, fax: 916-720-0577 and email: norrism@wellsfargo.com .*

Biological, Botanical, & Wetland Delineations

Clearlake Oaks Eskaton: *Designed and performed investigations and site-specific biological inventories to determine the presence of special status species or habitat for such species that may be affected by development of the Clearlake Oaks Eskaton Senior Housing Project. In addition, several other studies were conducted to include: 1) an investigation to determine the presence of wetlands subject to the jurisdiction of the US Army Corps of Engineers (Corps), pursuant to their authority under Section 404 of the Clean Water Act; and 2) a riparian determination. Permits were obtained from the United States Army Corps of Engineers, California Department of Fish & Game and the Regional Water Quality Control Board. Point of contact: Mr. Roy Hastings, 1610 El Nido Way, Sacramento, CA 95864, and email: roy.hastings@rlhastingsassociates.com . Phone: (916) 359-0626.*

City of Elk Grove: *Designed and conducted biological resources inventories, and conducted feasibility evaluations for the widening of Bond Road, Elk Grove Blvd., Sheldon Road and Grant Line Roads, City of Elk Grove, California. Habitat evaluation and botanical assessments were conducted both before and after the project. Wetland delineations were accomplished and certified by the U. S. Army Corps of Engineers, Sacramento District Regulatory Branch. Point of contact: Melanie J. Halajian, Senior Planner, 10461 Old Placerville Road, Suite 110, Rancho Cordova, CA 95827. (916) 361-8384, MHalajian@PMCWorld.com .*

Yuba County Public Works Department: *Designed and conducted Wetland Delineations and biological inventories for endangered plant and wildlife for the Star Bend Dredging Project on the Feather River, Yuba County, CA. Wetland delineations were accomplished and verified by the U. S. Army Corps of Engineers, Sacramento District Regulatory Branch (point of contact: Erin Hess, 916-557-6740, Erin.E.Hess@spk01.usace.army.mil) Reports were coordinated with the United States Fish & Wildlife Service and the United States Department of Commerce, National Oceanic and Atmospheric Administration. CEQA lead agency was the County o f Yuba (point of contact, Ken Godleski, Senior Engineer, kgodleski@co.yuba.ca.us , phone 530-749-5416)*

Browns Valley Irrigation District: *Designed and conducted Wetland Delineations and biological inventories for endangered plant and wildlife for the Tailwater Recapture Project on the French Dry Creek and Yuba River, Yuba County, CA. Wetland delineations were accomplished and verified by the U. S. Army Corps of Engineers, Sacramento District Regulatory Branch (point of contact: Peck Ha, 916-557-6617, Peck.Ha@usace.army.mil. CEQA lead agency was the Browns Valley Irrigation District (point of contact, Walter Cotter, General Manager, walter@bvid.or , phone 530-743-5703).*

MARCUS H. BOLE, Principal, B&A

EXPERTISE:

Environmental Project Management
Natural Resource Management
Environmental Site Assessment, Phase I and Phase II
Wetland Delineation, Mitigation, and Permitting

EDUCATION:

Masters Degree in Environmental Science
North Dakota State University, Fargo, 1976
Baccalaureate in Social Science, Political Science & Geography
California State University, Sacramento, 1970
Registered Environmental Property Assessor (REPA)
Certificate Program, Site Assessment and Remediation, UC Davis
Certificate Program, Land Use and Environmental Planning, UC Davis
California Community College Instructor Credential (Life), Environmental Sciences
Certified (OSMB) Disabled Veteran Business Enterprise (DVBE)
California Department of General Services (#0000847)
Certified OSHA Hazardous Materials
Certified FAA Airline Transport Pilot (#2168155)

PROFESSIONAL HISTORY:

Bole & Associates, Principal, 1991 - Present
U. S. Federal Government Manager of Environmental Engineering,
Compliance and Community Planning, 1970 - 1993
California State Division of Forestry, Engineer, 1966 - 1970

REPRESENTATIVE EXPERIENCE:

Mr. Bole has over thirty-five years of experience in environmental project management. A recognized expert in state and federal agency environmental regulations and procedures, he has directed operations throughout Northern California and Southern California. He has supervised work forces of professional engineers, scientists and technicians responsible for pollution monitoring, permitting, abatement, environmental impact analysis, natural resource restoration programs and hazardous waste characterization, storage and disposal. After a distinguished twenty-three year career in the United States Air Force as Chief, Environmental Management Division, Beale Air Force Base, Mr. Bole retired in the rank of Lieutenant Colonel and started Bole & Associates, Registered Environmental Assessors in Wheatland, Yuba County, California.

CHARLENE J. BOLE, Principal, B&A

EXPERTISE:

Environmental Project Management
Environmental Site Assessments (Phase I & II)
Threatened and Endangered Species
Wetland Delineation, Mitigation and Permitting

EDUCATION:

Masters Degree in Environmental Science
North Dakota State University, Fargo, 1979
Baccalaureate in Social Science
California State University, Sacramento, 1974
Graduate Course work in Environmental Sciences, Botany
Registered Environmental Property Assessor (REPA)
State of California Standard Teaching Credential
State of California Pupil Personnel Credential
California Community College Instructor, Psychology
California Community College Counselor Credential

PROFESSIONAL HISTORY:

Bole & Associates, Principal, 1991 - Present
Consultant, Instructor for US Army, Department of Defense, Belgium, 1988 - 1991
Senior Project Manger, Environmental Development Center, Belgium, 1988 - 1991
Consultant and Instructor for Department of Defense, Japan, 1985 - 1987
Teacher, Wheatland School District, CA, 1980 - 1984
Counselor, Minot Public Schools, ND, 1977 - 1979

REPRESENTATIVE EXPERIENCE:

Ms. Bole has over twenty-five years of experience in environmental project management, environmental science instruction and consulting. She has directed major environmental projects for the Department of Defense, both in the United States and in foreign countries. A recognized expert in research development and management, she has supervised work forces of professional scientists and technicians responsible for a wide array of environmental issues in Northern California and Yuba County. Her areas of expertise include wildlife ecology, regulatory compliance, natural resource and habitat conservation planning, and the delineation of waters of the United States. Her organizational skills have consistently resulted in finding the most cost effective means for project implementation and completion.

DAVID H. BOLE, Senior Wildlife Biologist, B&A

EXPERTISE:

Wildlife Biology
Environmental Project Management
Natural Resource Conservation Management
Environmental Site Assessment, Phase I ESA
Wetland Delineation, Mitigation, and Permitting

EDUCATION:

Baccalaureate in Biology
California State University Long Beach, 2000
Graduate Studies leading to Masters Degree, Biology
California State University Long Beach, In Progress
Registered Environmental Property Assessor (REPA)
Certified Wetland Delineator, U. S. Army Corps of Engineers
Certified Open Water SCUBA, Advanced PADI

REPRESENTATIVE EXPERIENCE:

As senior staff biologist, David H. Bole has been instrumental in the implementation of a wide variety of wildlife surveys, habitat evaluations, wetland determinations, and natural resource management projects. Based on his advanced knowledge of herpetology, David was selected to lead a team of biologists in support of studies of the Salton Sea for the San Diego Museum of Natural History. He has conducted comprehensive Natural Environment Studies for the California Department of Transportation, and participated in the evaluation of spawning and rearing habitats associated with the Yuba River Fisheries Habitat Enhancement Project. A recognized expert in the field of environmental science, David is a State of California Registered Environmental Assessor who has completed over 200 Phase I Environmental Site Assessments in Northern and Southern California. As a project manager, David pioneered the integration of biology, hydrology, subsurface interface radar and computer science in providing environmental planning services for private and public agencies throughout California. During the early stages of project design, David has conducted over 300 endangered wildlife surveys and evaluations that have resulted in the avoidance of costly special status species and wetland mitigation measures while preserving the natural habitat associations in the Central Valley.

JAMES A. GIBSON, Certified Asbestos Consultant, B&A

EXPERTISE:

Certified Asbestos Surveys
Sampling & Packaging Samples for Lab Delivery
Indoor Air Quality Evaluations (Mold)
Air Clearance Sampling for Mold & Asbestos
BioTrace Clearance Sampling for Bio-Hazard & Sewage Remediation

EDUCATION & CERTIFICATIONS:

State of California Certified Asbestos Consultant, DOSH #01-2960
Certified Microbial Investigator (American Indoor Air Quality Assoc.)
Forensic Analytical Workshop, Microbial Contamination
Asbestos Contractor Supervisor Refresher

REPRESENTATIVE EXPERIENCE:

Jim brings over twenty years of environmental management of hazardous materials experience to B&A. A State of California Certified Asbestos Consultant (CAC) and Site Surveillance Technician (SST), Jim performs all our asbestos inspections and testing in compliance with local, state and federal asbestos regulations. An American Indoor Air Quality Council, Certified Microbial Investigator (CMI), he conducts all mold and bio-hazard inspections and testing in accordance will the highest industry standards. Jim has conducted hundreds of asbestos inspections in Yuba County with a list of clients that include: Yuba County Public Works, Yuba County Airport, Yuba County Risk Management, Yuba County Planning Department, Yuba County Water Agency, and numerous public agencies in Sutter County. B&A specializes in the evaluation of water/fire-damaged structures, pre-demolition asbestos surveys, asbestos operations and maintenance plans, and indoor air quality investigations. We provide detailed written reports that guide and assist the abatement/remediation contractors throughout the abatement process. Jim also conducts post remediation/clearance testing upon project completion.

Bole & Associates
An Environmental Consulting Company

Labor Rates, Bole & Associates

Rates Effective October 1, 2012

Project Manager	**$95 per Hour**
Environmental Technician (Asbestos)	**$65 per Hour**
Environmental Scientist (Phase I)	**$95 per Hour**
Archaeologist	**$95 per Hour**
Wildlife Biologist	**$85 per Hour**
Botanist	**$85 per Hour**
Hydrologist	**$95 per Hour**
Clerical	**$30 per Hour**

BOLE & ASSOCIATES are covered by Worker's Compensation and Liability Insurance, Commercial General Liability, and Profession Liability policies issued through Frenkel of California, 350 Hudson Street, 4th Floor, New York, New York 10014. Phone 212-488-1869, Fax 212-488-0246, Contact Renee Molina at: email: rmolina@frenkel.com

Client#: 71524 BOLEASSO

ACORD™ CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 05/20/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer any rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Christi Nistler	
Frenkel & Company 350 Hudson Street 4th Floor New York, NY 10014	PHONE (A/C, No, Ext): 212-488-0230	FAX (A/C, No): 646-514-9597
	E-MAIL ADDRESS: cnistler@frenkel.com	

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Westchester Surplus Lines Co	10172
INSURER B : State Compensation Ins. Fund	35076
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED
Bole and Associates
6898 Penny Way
Browns Valley, CA 95918

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY			G24299223004	07/09/2018	07/09/2020	EACH OCCURRENCE	$1,000,000
	CLAIMS-MADE X OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$50,000
	X Contractors Poll.						MED EXP (Any one person)	$10,000
	X Occurrence Form						PERSONAL & ADV INJURY	$1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$2,000,000
	X POLICY PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$2,000,000
	OTHER:							$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$
	ANY AUTO						BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
	UMBRELLA LIAB OCCUR						EACH OCCURRENCE	$
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$
	DED RETENTION $							$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N			901110319	04/19/2019	04/19/2020	X PER STATUTE OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y	N / A					E.L. EACH ACCIDENT	$1,000,000
	(Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$1,000,000
							E.L. DISEASE - POLICY LIMIT	$1,000,000
A	Professional Liability			G24299223004	07/09/2018	07/09/2020	Each Claim: $1,000,000 Ded.: $2,500	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Proof of Insurance

CERTIFICATE HOLDER

Proof of Insurance

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

© 1988-2015 ACORD CORPORATION. All rights reserved.

The ACORD name and logo are registered marks of ACORD

MPAM1

APPENDIX F: SUPPORTING DOCUMENTATION

ENVIRONMENTAL QUESTIONNAIRE

NRCS WEB SOIL SURVEY SOILS MAP

NWI MAP

Bole & Associates

An Environmental Consulting Firm

ENVIRONMENTAL QUESTIONNAIRE AND DISCLOSURE STATEMENT

The attached checklist is intended to provide a level of inquiry consistent with the requirements of *40 CFR*, ASTM Standards & SBA's *SOP 50 10 5(F)*. This questionnaire is to be completed and signed by the property owner/seller.

In preparing this document, the property owner must make a good faith effort to answer the questions in this checklist. Time and care should be taken to check whatever records are in the owner's possession. If any of the following questions are answered in the affirmative or if answers are unknown, are qualified or cannot be obtained, the burden is on the environmental consultant to determine whether further inquiry is appropriate. The property owner should document the reason for any affirmative answer to provide the consultant with all appropriate information. Moreover, the environmental consultant must make a determination regarding further inquiry in any area where the property owner provides incomplete information and then give reasons for the conclusion.

Current property owners contact information (required information):

Name of Owner/s: PAUL HOWARD

Mailing address: 8251 ALPINE AVE SAC CA 95826

Phone number; 916-837-1817

Key site Personnel NONE **Phone Number** _____

Date originally purchased 1-24-17

Buyer/s contact information (if known):

Name of Buyer/s: _____

Mailing address: _____

Phone number: _____

Subject property: (address & APN Number):

Address 1020 NORTHSIDE DR.

APN: 071-500-37-100

Square feet of building N/A **Size of lot** (total acreage) _____

Number of rooms/stories in building(s) _____

1. Date current operations began on this site NONE

2. What year(s) were any building(s) on site constructed and/or renovated?
N/A

Please refer to appendix A to find the NAIC code if applicable. If there is no code for the type of business, please describe the business (e.g., vacant land, residential, etc.)

3. The type of business currently conducted on the site. (Use NAICS code and provide a description of the business. NONE

4. Type of business to be operated on the premises. (Use NAICS code and provide a description of the busines

5. To the extent known, please identify the prior uses of the property and the prior owner(s) of the site during the past 50 years: NOT KNOWN

Dates	Land Use (NAICS code)	Property Owner/Phone

6. **Land use:** Please indicate the **current uses of the adjoining properties** (use NAICS codes and description) Adjoining properties include those that border the immediate site and include properties across the street from the property. NO CLUE

Adjoining property (north): NAICS code

Adjoining property (south): NAICS code

Adjoining property (east): NAICS code

Adjoining property (west): NAICS code

7. Please indicate the **past (50 years) uses of the adjoining properties** (use NAICS codes and description) Adjoining properties include those that border the immediate site and
include properties across the street from the property. N/A

Previous use (north): NAICS code

Previous use (south): NAICS code

Previous use (east): NAICS code

Previous use (west): NAICS code_____

8. Are you aware of any environmental hazards or contamination **present on surrounding properties** (e.g., underground tanks, heavy industry, manufacturing, refining, landfills/waste disposal, waste treatment, agricultural purpose or ground water contamination)?

___ YES _X_ NO (If "YES", Please describe)

9A. Have any of the following environmental permits, registrations, or agreements **currently** issued for the property? ____ Yes _X_ No (If yes, please check all applicable categories and attach a copy of the permit(s) :

_____ National Pollutant Discharge Elimination System Permit
_____ Air Emissions Permit
_____ Wastewater Discharge Permit
_____ Underground Storage Tank Permit
_____ Hazardous Materials Monitoring Program Permit
_____ other (please describe) _____

9B. Have any of the following environmental permits, registrations, or agreements been issued for the property in the **past**? ____ Yes _X_ No (If yes, please check all applicable categories and attach a copy of the permit(s) :

_____ National Pollutant Discharge Elimination System Permit
_____ Air Emissions Permit
_____ Wastewater Discharge Permit
_____ Underground Storage Tank Permit
_____ Hazardous Materials Monitoring Program Permit
_____ Other (please describe) _____

9C. Are any of the following environmental permits, registrations, or agreements **currently applied for**? ____ Yes _X_ No (If yes, please check all applicable categories and attach a copy of the permit(s) :

_____ National Pollutant Discharge Elimination System Permit
_____ Air Emissions Permit
_____ Wastewater Discharge Permit
_____ Underground Storage Tank Permit
_____ Hazardous Materials Monitoring Program Permit
_____ Other (please describe) _____

9D. Have any environmental audits (Phase I, Phase II, Transaction Screens) of the site ever been conducted?

_____ YES Date _____ By whom? _____ Attach report

_X_ NO

10. Has the owner of the property or operator of the facility been informed of the presence of hazardous substances or environmental **violations** in regards to the property or the facility located on the property?

____ YES __X__ NO (If "YES", Please describe)

11. Are you aware of any environmental assessments of the property that indicated the presence of hazardous substances on the site or recommended further assessment of the property?

____ YES __X__ NO (If "YES", Please describe)

12. Have there been any past pollution problems, investigations, or cleanup activities on the property, including investigations of potential Superfund actions?

____ YES __X__ NO (If "YES", Please describe.)

13. Are there any past, current, or pending regulatory actions by federal, state, or local environmental agencies alleging noncompliance with regulations?

_____ YES __X__ NO (If "YES", Please describe)

14. Are there any past, current, or pending lawsuits or administrative proceedings for alleged environmental damages involving the property, you or any owner or tenant of the property.

_____ YES__X__ NO (If "YES", Please describe)

15. Does the owner of the property or operator of the facility have any knowledge of environmental liens or governmental notification relating to violations of environmental laws in regards to the property or any facility located on the property?

_____ YES __X__ NO (If "YES", Please describe)

16. Have there been any worker complaints or regulatory investigation regarding illness resulting from hazardous material exposure at the facility?

_____ YES __X__ NO (If "YES", Please describe)

17. Has the facility applied for or been issued a permit as a Hazardous Waste Generator, Hazardous Waste Treatment, Storage or Disposal Facility, or a Hazardous Waste hauler?

_____ YES __X__ NO (If "YES", Please describe and attach permits.)

If yes, what is the current practice for disposal of the used solvents, oils, metals shavings, plating solutions, etc.?

18. Are there any pesticides, automotive or industrial batteries, paints or other chemicals stored on the property or at the facility other than undamaged containers of consumer products of fewer than five gallons in total volume?

_____ YES __X__ NO (If "YES", Please describe)

19. Have there ever been any spills, leaks, or accidental releases of pesticides, fertilizers, fuels, oils, or other chemicals into the environment?

_____ YES __X__ NO (If "YES", Please describe)

20. Are there any plastic or metal industrial drums (typically 55-gallon) located on the property or at the facility?

_____ YES __X__ NO (If "YES", Please describe and indicate the type of spill containment)

21. Have any construction debris, substances identified as hazardous, unidentified waste materials, tires, automotive or industrial batteries, fill dirt that could have been contaminated, or any other waste material been dumped above grade, buried and/or burned on the site?

_____ YES __X__ NO (If "YES", Please describe)

22. Are there any pits, ponds or lagoons located on the property in connection with waste treatment or waste disposal?

_____ YES __X__ NO (If "YES", Please describe)

23. Are there any vent pipes protruding from the ground at the property or adjacent to any structure located on the property?

_____ YES __X__ NO (If "YES", Please describe)

24. Are there now, or have there ever been storage tanks above (AST) or underground (UST) located on the site?___ YES __X__ NO (If "YES", indicate the number of tanks and the contents and age of each tank):

Total number of tanks: _____

	Contents	Type of tank (UST or AST)	age of tank	capacity
#1	_____	_____	_____	_____
#2	_____	_____	_____	_____
#3	_____	_____	_____	_____
#4	_____	_____	_____	_____

24A. Date of equipment testing (All required tank/line tests must be current (within the past 6 months) N/A

UST tightness tests _____
Line tightness tests _____
Vapor recovery (Stage II) systems _____
Monitoring systems _____
Hydrostatic testing of containment devices _____

Name and contact information for independent contractor who conducted these tests: N/A

Name_____
Address_____Phone number _____
PLEASE ATTACH TEST RESULTS

24B. Have any of the following measures been provided for the underground tanks and their associated piping? Please indicate, as appropriate, and note the tank affected: N/A

_____ Integrity testing
for _____

_____ Leak detection system
for _____

_____ Secondary containment
for _____

_____ cathodic protection
for _____

_____inventory reconciliation
for_____

_____ overfill spill protection
for _____

_____ other (please describe)
for _____

24C. Has an underground storage tank leak ever occurred on the property? N/A

_____ YES _____ NO (If "YES", Please describe)

25. Are there any above or below ground pipelines on site used to transfer chemicals or waste? N/A

____ YES ____ NO (If "YES", Please describe):

25A. Have the pipelines been inspected or tested for leaks? N/A

_____YES ____NO (If yes, please indicate the results):

26. Does the property discharge waste water (other than storm water) directly to a ditch or stream on or adjacent to the property?

____ YES _X_ NO (If "YES", Please describe)

27. Are there any on-site sewage disposal systems (e.g. septic tank, wastewater treatment plant)?

____ YES ___X___ NO If "YES", Please describe the system(s) and the date and nature of any failures of the system(s).

28. If the property is served by a private well or non-public water system, has the well or system been designated as contaminated by any government environmental/health agency? N/A

____ YES ____ NO (If "YES", Please describe)

29. **Asbestos:** If the property or any building(s) located on the property was constructed prior to 1978 was any asbestos-containing materials in the building on site? N/A

____ YES ____ NO (If "YES", please indicate which building(s). If any asbestos tests or surveys have been conducted, please attach the results)

30. **Polychlorinated biphenyls (PCBs):** If there are electrical transformers, switchers, capacitors, or other comparable devices on the premise, have they been inspected for the presence of polychlorinated biphenyls or other hazardous toxic substances? N/A

____ YES ____ NO (If "YES", are there maintenance and emergency response procedures for the PCB equipment in the event of a leak, spill, or fire?)

Have there been any spills, leaks or other events on site involving the PCP electrical equipment?

____ YES ____ NO (If "YES", Please describe)

30A. Have there been any leaks, spills, or fires on site involving PCB electrical equipment?

_____ YES ___X___ NO (If "YES", Please describe)

30B. Is there a transformer that is not owned by a public or private utility or group and for which there are no records indicating the absence of PCBs?

_____ YES ___X___ NO (If "YES", Please describe)

31. **Radon**: Has the property or any buildings located on the property been tested for radon?

_____ YES __X__ NO (If "YES", Please describe)

32. **Urea-Formaldehyde**: Does the property or any buildings located on the property contain any urea-formaldehyde materials?

____ YES __X__ NO (If "YES", Please describe)

33. **Lead:** If the property or any buildings located on the property were constructed prior to 1978, was lead-based paint or lead plumbing used? N/A

____ YES ____ NO (If "YES", Please describe) If any lead tests or surveys have been conducted, please attach the results)

34. **Agricultural Land:** Have pesticides, herbicides or other agricultural chemical been stored, mixed on or applied to the property?

____ YES __X__ NO (If "YES", Please describe)

35. Have there been any citizen complaints from the surrounding community regarding the activities conducted on the property?

____ YES __X__ NO (If "YES", Please describe)

36. Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law? (40 CFR 312.25)

____ YES __X__ NO (If "YES", please include an explanation)

37. Are you aware of any activity and use limitations (AUL's), such as engineering? controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law? (40 CFR 312.26)

____ YES __X__ NO (If "YES", please include an explanation)

38. As the User of this ESA do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of chemicals and processes used by this type of business? (40 CFR 312.28) N/A

____ YES ____ NO (If "YES", please include an explanation)

39. Does the purchase price being paid for this property reasonably reflect the fair market value of the property? (40 CFR312.29)

X YES ____ NO (If "NO", please include an explanation)

40. Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property: (40 CFR 312.31).

____ YES X NO (If "YES", please include an explanation)

Person completing this questionnaire:

Name: PAUL HOWARD

Relationship to site: OWNER

Address: 8251 ALPINE AV SAC CA 95826

Phone number: 916-837-1817

Date: 5-17-19

I am familiar with the property descried in this questionnaire. To the best of my knowledge the above statements and facts are true and correct and that to the best of my knowledge no material facts have been omitted or misstated.

Paul Howard 5-17-19

Signature/Date

PLEASE FAX COMPLETED QUESTIONNAIRE TO 530-633-0119 or scan and email to davidhbole@yahoo.com

Bole & Associates, 6898 Penny Way, Browns Valley, CA 95918
Phone: (Office) 530-743-7093, (Cell) 530-415-6623, FAX 530-633-0119, email for Senior Environmental Scientist David H. Bole, davidhbole@yahoo.com

APPENDIX A

NAICS CODES OF ENVIRONMENTALLY SENSITIVE INDUSTRIES

How to determine if an industry is included on this list:
A 3 digit NAICS code includes all industries beginning with those 3 digits.
A 4 digit NAICS code includes all industries beginning with those 4 digits.
A 5 digit NAICS code includes all industries beginning with those 5 digits.
A 6 digit NAICS code includes only that industry under that industrial code.

211 OIL & GAS EXTRACTION
212 MINING (EXCEPT OIL & GAS)
213 SUPPORT ACTIVITIES FOR MINING
237 HEAVY & CIVIL ENGINEERING CONSTRUCTION
311 FOOD MANUFACTURING
312 BEVERAGE & TOBACCO PRODUCT MANUFACTURING
313 TEXTILE MILLS
314 TEXTILE PRODUCT MILLS
315 APPAREL MANUFACTURING
316 LEATHER & ALLIED PRODUCT MANUFACTURING
321 WOOD PRODUCT MANUFACTURING
322 PAPER MANUFACTURING
323 PRINTING & RELATED SUPPORT ACTIVITIES
324 PETROLEUM & COAL PRODUCTS MANUFACTURING
325 CHEMICAL MANUFACTURING
326 PLASTICS & RUBBER PRODUCTS MANUFACTURING
327 NONMETALLIC MINERAL PRODUCTS MANUFACTURING
331 PRIMARY METAL MANUFACTURING
332 FABRICATED METAL PRODUCT MANUFACTURING
333 MACHINERY MANUFACTURING
334 COMPUTER & ELECTRONIC PRODUCT MANUFACTURING
335 ELECTRICAL EQUIPMENT, APPLIANCE & COMPONENT MANUFACTURING
336 TRANSPORTATION EQUIPMENT MANUFACTURING
337 FURNITURE & RELATED MANUFACTURING (*if finishing occurs on site*)
339 MISCELLANEOUS MANUFACTURING
42311 AUTOMOBILE & OTHER MOTOR VEHICLE MERCHANT WHOLESALERS *(if service bays present)*
42314 MOTOR VEHICLE PARTS (USED) MERCHANT WHOLESALERS
4235 METAL & MINERAL MERCHANT WHOLESALER
42393 RECYCLABLE MATERIAL MERCHANT WHOLESALER
4246 CHEMICAL & ALLIED PRODUCTS MERCHANT WHOLESALERS
4247 PETROLEUM & PETROLEUM PRODUCTS MERCHANT WHOLESALERS
441 MOTOR VEHICLE AND PARTS DEALERS *(if service bays present)*
447 GASOLINE STATIONS
45431 FUEL DEALERS
481 AIR TRANSPORTATION
482 RAIL TRANSPORTATION
486 PIPELINE TRANSPORTATION
53212 TRUCK, UTILITY TRAILER, AND RV (RECREATIONAL VEHICLE) RENTAL & LEASING
53241 CONSTRUCTION, TRANSPORTATION, MINING & FORESTRY MACHINERY & EQUIPMENT RENTAL & LEASING

53249 OTHER COMMERCIAL & INDUSTRIAL MACHINERY & EQUIPMENT RENTAL & LEASING
54138 TESTING LABORATORIES
56171 EXTERMINATING & PEST CONTROL
562 WASTE MANAGEMENT & REMEDIATION SERVICES
62149 OTHER OUTPATIENT CARE CENTERS
6215 MEDICAL & DIAGNOSTIC CENTERS
6221 GENERAL MEDICAL & SURGICAL HOSPITALS
71391 GOLF COURSES & COUNTRY CLUBS
71392 SKIING FACILITIES
71393 MARINAS
7212 RV (RECREATIONAL VEHICLES) PARKS & RECREATIONAL CAMPS
8111 AUTOMOTIVE REPAIR & MAINTENANCE
8112 ELECTRONIC & PRECISION EQUIPMENT REPAIR & MAINTENANCE
8113 COMMERCIAL & INDUSTRIAL MACHINERY & EQUIPMENT REPAIR & MAINTENANCE
8122 DEATH CARE SERVICES
8123 LAUNDRY & DRY CLEANING SERVICES ***(if dry cleaning operations on-site)***
812921PHOTOFINISHING LABORATORIES

A COMPLETE LIST OF INDUSTRIES AND CORRESPONDING NAICS CODES IS AVAILABLE ONLINE AT: http://www.census.gov/epcd/naics02/naicod02.txt

Soil Map—El Dorado Area, California
(1020 Northside Drive Soils Map)

Map Scale: 1:732 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 35 70 140 210

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 10, Sep 12, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 20, 2017—Aug 8, 2017

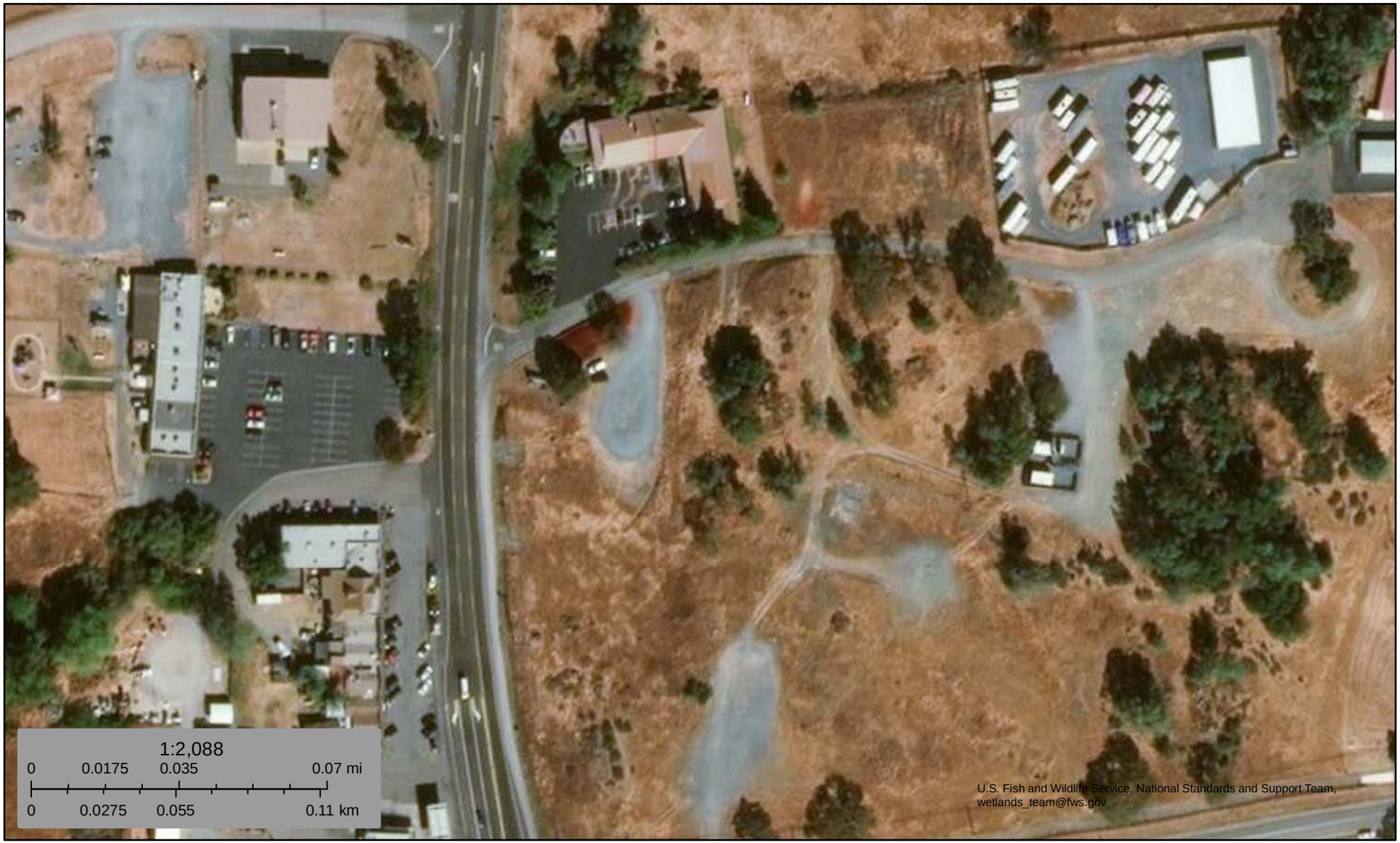
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AwD	Auburn silt loam, 2 to 30 percent slopes	0.2	8.3%
DeE	Delpiedra very rocky loam, 3 to 50 percent slopes	1.7	91.7%
Totals for Area of Interest		**1.8**	**100.0%**

U.S. Fish and Wildlife Service
National Wetlands Inventory

1020 Northside Drive NWI Map



June 17, 2019

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Appendix I

Traffic Impact Analysis

ADDENDUM TO
TRANSPORTATION IMPACT ANALYSIS

FOR

COOL DOLLAR GENERAL STORE

El Dorado County, California

Prepared For:

WoodCrest Companies
1410 Main Street, Suite C
Ramona, CA 92065

Prepared By:

KD Anderson & Associates, Inc.
3853 Taylor Road, Suite G
Loomis, CA 95650
(916) 660-1555

September 16, 2020

Job No. 9470-02

ADDENDUM TO TRANSPORTATION IMPACT ANALYSIS FOR
COOL DOLLAR GENERAL STORE
El Dorado County, California

TABLE OF CONTENTS

INTRODUCTION **1**
Project Description 1

EXISTING SETTING - SATURDAY **4**
Study Area Intersections 4
Existing Saturday Traffic Volumes / Levels of Service 4
Pedestrian / Bicycle Activity 8
Collision History 8

PROJECT CHARACTERISTICS **9**
Trip Generation 9
Vehicle Trip Distribution / Assignment 10

PROJECT TRAFFIC EFFECTS **11**
Existing Plus Project Saturday Traffic Conditions and Levels of Service 11
Project Impacts to Alternative Transportation Modes 14
Site Access 14

SUMMARY AND CONCLUSIONS **16**

APPENDIX **17**

ADDENDUM TO TRANSPORTATION IMPACT ANALYSIS FOR
COOL DOLLAR GENERAL STORE
El Dorado County, California

INTRODUCTION

This report summarizes a supplemental analysis of the traffic effects associated with a Dollar General Store proposed in the rural El Dorado County community of Cool, California. The information herein follows up on a transportation impact analysis prepared for the project on March 9, 2020 to address summer weekend conditions with the project. To assess traffic effects, new Saturday summer traffic counts have been made and adjusted based on available data to account for the effects of COVID-19 on regional travel. The characteristics of the proposed project have been determined, including estimated peak trip generation, and conditions with and without the Dollar General Store have been assessed based on operating Levels of Service and peak period queues.

Project Description

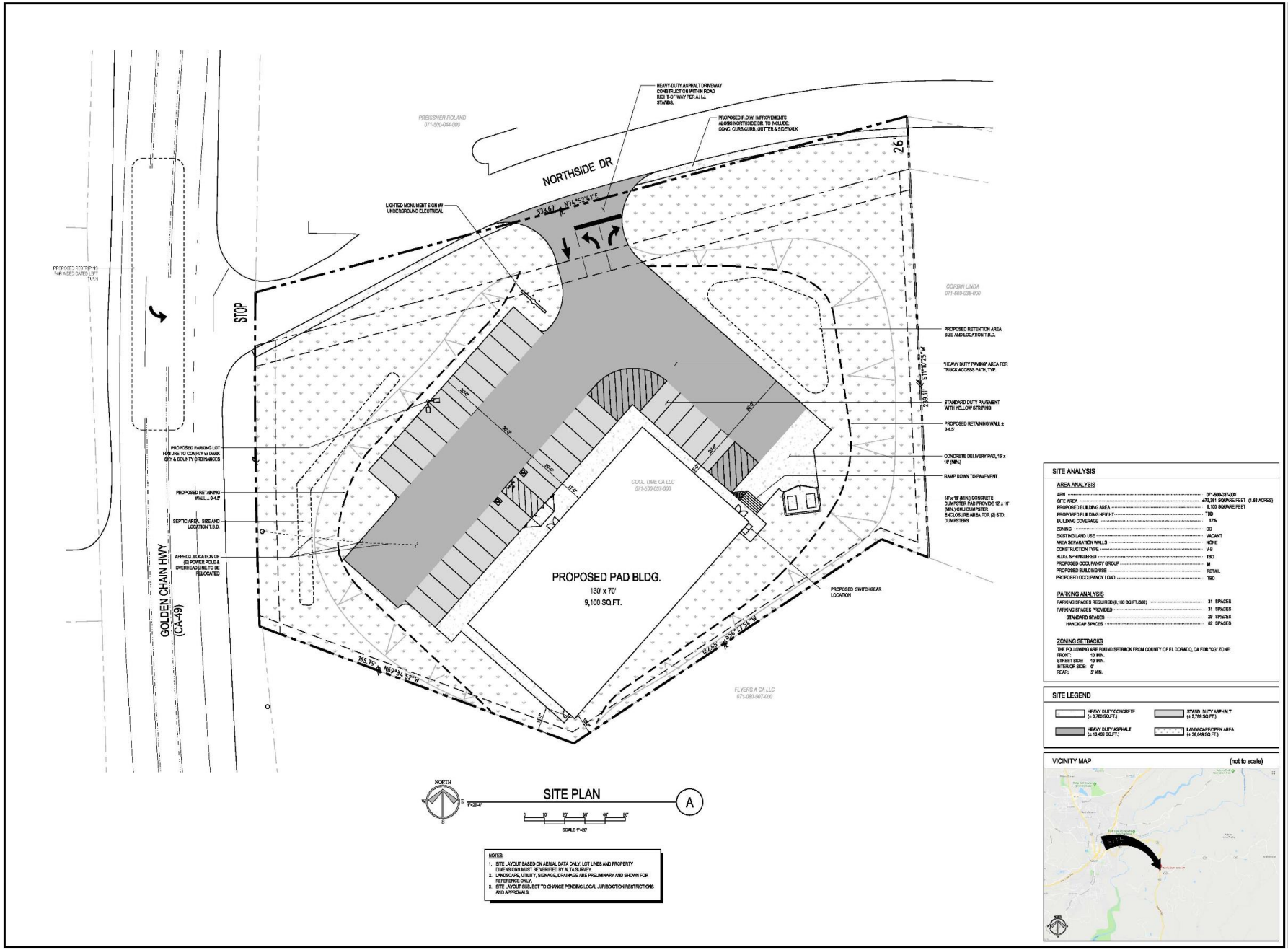
The proposed project remains a 9.1 ksf Dollar General Store located on an approximately 1.68 acre site on the south side of Northside Drive about 190 feet east of SR 49 (centerline to centerline). The project will include development of 31 parking spaces per El Dorado County Zoning Ordinance requirements. Access to the site will be provided via a single driveway on Northside Drive. The driveway is about 35 feet from the USPS Driveway to the west and is about 655 feet from the Cool Boat and RV Storage across Northside Drive to the east. Figures 1 and 2 display the regional location of the project and proposed site plan, respectively.

VICINITY MAP

KD Anderson & Associates, Inc.
Transportation Engineers

9470-02 RA 9/10/2020

figure 1



KD Anderson & Associates, Inc.
Transportation Engineers

9470-02 RA 9/10/2020

SITE PLAN

figure 2

EXISTING SETTING - SATURDAY

The previous report described the facilities that are available today serving vehicular, pedestrian and bicycle traffic and transit users in the Cool area of El Dorado County, as well as policies that guide consideration of traffic effects. Key information is presented again.

Study Area Intersections

The quality of traffic flow is often governed by the operation of key intersections. The following intersections have been evaluated in this addendum.

The **State Route 49 / Northside Drive intersection** is a "Tee" intersection controlled by a westbound stop sign on Northside Drive. A Two-Way-Left-Turn-Lane is present on SR 49. The Northside Drive approach is a single lane, and there are no crosswalks present.

The **State Route 49 / State Route 193 intersection** is a four-way intersection controlled by an all-way stop with an overhead flasher. SR 49 has separate left turn lanes on each approach. A southbound right turn lane exists, and the northbound thru lane is wide enough to allow right turns outside of the queue of northbound traffic. The SR 193 westbound approach is wide enough to act as a combined left-thru lane and a separate right turn lane, and the eastbound leg is a single lane private drive. Crosswalks exist on the south and east side of the intersection.

The **USPS Driveway / Northside Drive intersection** is a "Tee" controlled by a stop sign on the southbound USPS Driveway. There are no auxiliary lanes or crosswalks present.

Existing Saturday Traffic Volumes / Levels of Service

Traffic Volume Counts. New Saturday traffic counts were made for this study on August 29, 2020 from noon to 2:00 p.m. at these locations:

- SR 49 / SR 193
- SR 49 / Northside Drive

They represent the main intersection in Cool and provide data relating to the project's access.

Because the exact effects of COVID-19 on regional travel are uncertain, an appliable method was used to adjust these counts to "normal" summer weekend conditions and to validate the result. A cell-phone based "Big Data" service (i.e., Streetlight) was employed. Streetlight aggregates continually recorded cell phone based data (pings) and uses algorithms to equate that data to automobiles based on available traffic volume data. In this case, data was collected at the SR 49 / SR 193 intersection for Saturdays in July-August from 11:00 a.m. to 5:00 p.m. Data was assembled for 2019 (No COVID-19) and for 2020 during this time period.

To validate this information the average total traffic volume reported by Streetlight for the noon-2:00 p.m. period was found for summer 2020 conditions (1,828 vehicles) and compared to that in the August 29, 2020 two-hour count (1,778 vehicles) as shown in Table 1. The difference of 50 vehicles, or 2.8%, is not significant.

TABLE 1
SATURDAY NOON TO 2:00 TRAFFIC VOLUMES AT
SR 49 / SR 193 INTERSECTION (VEHICLES)

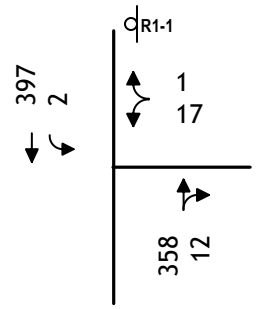
August 29, 2020 count	Average July-August 2020	Difference (count minus average)	Average July-August 2019	Difference (2019-2020)	Adjustment Factor Applied
1,778	1,828	50 (2.6%)	1,971	143 (8%)	10%

Comparison of Year 2019 and Year 2020 two-hour data indicated that last year's average volumes were roughly 8% greater than those developed for 2020. To provide a conservative estimate the 2020 Saturday peak hour counts at all locations were increased by 10% to approximate regular conditions. The resulting volumes are noted in Figure 3. This data has been used to determine the operating Level of Service (LOS) at each intersection, to assess queueing and to evaluate the status of traffic signal warrants.

Level of Service at Intersections. Levels of Service were calculated using the methods presented in the Highway Capacity Manual, 6th Edition (HCM 6 Ed). Intersection Levels of Service were calculated using SYNCHRO 10.0 software. For intersections controlled by side street stop signs, the reported Level of Service reflects the "worst case" movement, which is typically those motorists waiting to enter the main street.

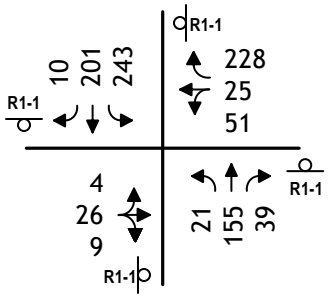
As indicated in Table 2, on Saturday each intersection delivers a peak hour Level of Service that satisfies minimum El Dorado County standards. As indicated, the Levels of Service calculated for Saturday conditions are similar to or slightly better than those presented for the weekday p.m. peak hour. Peak hour traffic signal warrants are satisfied at the SR 49 / SR 193 intersection based on Saturday data.

1



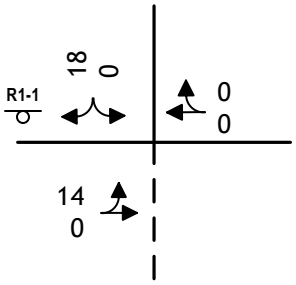
SR 49/ Northside Dr

2



SR 49/ SR 193

3



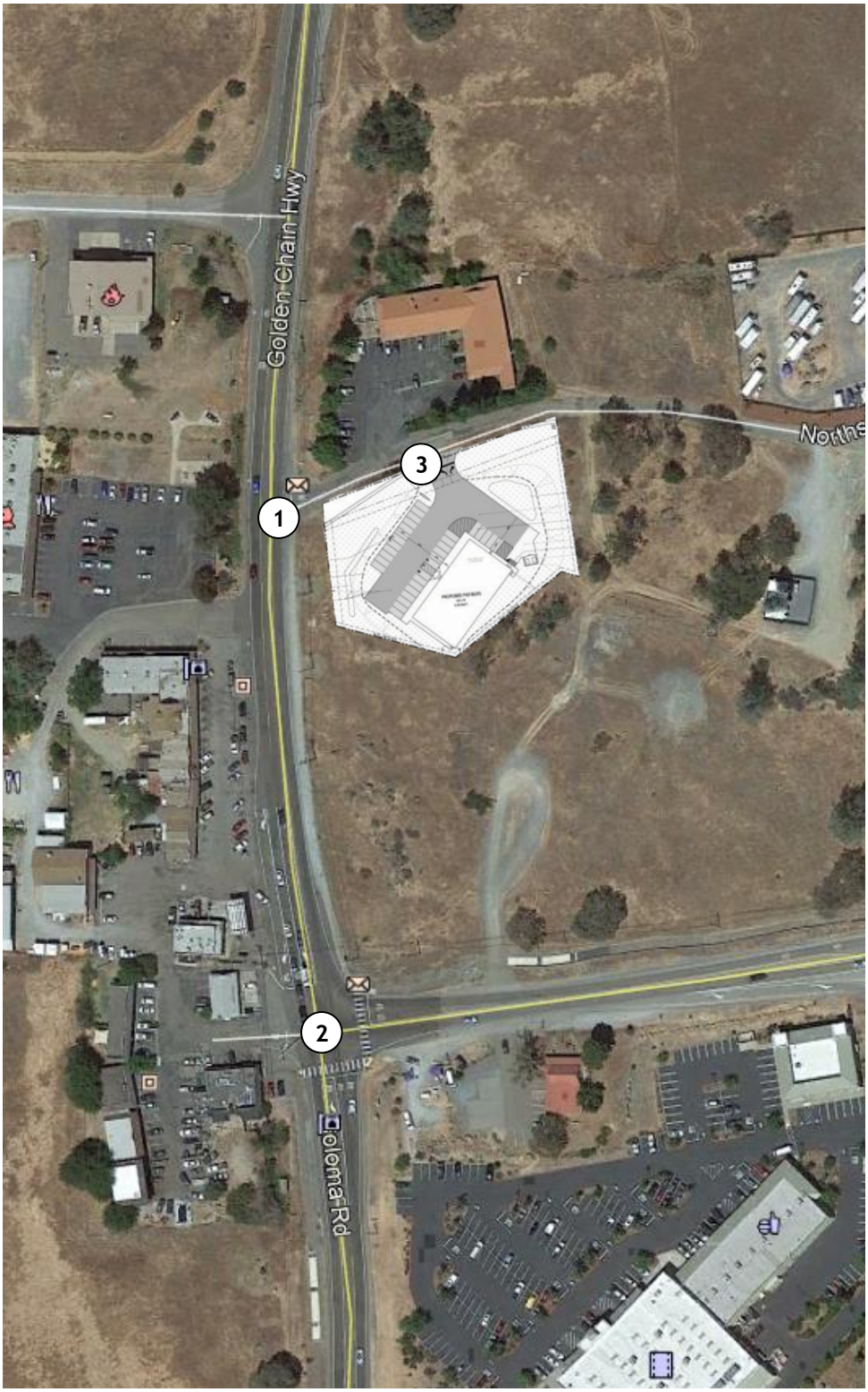
Project Access/ USPS Access/
Northside Dr

Legend

XX	AM Peak Hour Volume
(XX)	PM Peak Hour Volume
R1-1	Stop Sign
	Signalized Intersection

NORTH

N.T.S.



EXISTING SATURDAY TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

9470-02 RA 9/10/2020

figure 3

TABLE 2
EXISTING INTERSECTION LEVELS OF SERVICE

Intersection	Control	Weekday PM Peak Hour		Saturday Peak Hour (12:30 to 1:30 pm)		Peak Hour Signal Warrant Met?*
		Average Delay (veh/sec)	LOS	Average Delay (sec/veh)	LOS	
1. State Route 49 / Northside Dr						
Southbound left turn	WB Stop	7.9	A	8.1	A	No
Westbound approach		16.3	C	16.0	C	
2. State Route 49 / State Route 193	AWS	17.7	C	13.9	B	Yes
3. USPS Driveway / Northside Dr						
Southbound approach	SB Stop	8.5	A	-	A	No
Eastbound approach		7.1	A	7.2	A	

* CA MUTCD Peak Hour Signal Warrant, Figure 4C-3.
AWS is All-Way Stop Control

95th Percentile Queues. Table 3 identifies the 95th percentile queues occurring during the p.m. peak hour at the SR 49 / SR 193 intersection. These values are a byproduct of HCM LOS analysis. As indicated, all estimated queues can be accommodated within the available storage, and no improvements are currently needed.

TABLE 3
EXISTING INTERSECTION PEAK HOUR QUEUES

Intersection	Lane	Storage (feet)	Weekday PM Peak Hour		Saturday Peak Hour		Storage Adequate?
			Volume (vph)	95th % Queue (feet)	Volume (vph)	95th % Queue (feet)	
State Route 49 / SR 193	SB left	200[1]	374	170	243	75	Yes
	NB left	150[1]	15	<25	21	<25	Yes
	WB approach	unlimited	200	40	304	70	Yes

[1]lane continues as TWLT lane

Roadway Segment Level of Service. Table 4 identifies the current operating Level of Service on the roadways in the vicinity of the project. As shown, the roadway segments in this area operate at LOS D during the peak hour on Saturday. Conditions are similar to but in some cases better than those during the weekday p.m. peak hour.

TABLE 4
EXISTING ROADWAY SEGMENT LEVELS OF SERVICE

Road	Location	Direction	Weekday PM Peak Hour				Saturday Peak Hour			
			Volume (vph)	ATS (mph)	PTSF (%)	Level of Service	Volume (vph)	ATS (mph)	PTSF (%)	Level of Service
SR 49	North of SR 193	NB	257	40.7	53.9	D	387	40.2	68.7	D
		SB	561	39.5	77.4	E	454	40.4	74.3	D
	South of SR 193	NB	213	42.1	58.3	D	215	42.1	57.9	D
		SB	256	41.8	65.8	D	261	41.8	65.9	D
SR 193	East of SR 49	EB	467	40.3	72.3	D	308	41.3	66.5	D
		WB	200	41.6	47.0	D	304	41.3	65.3	D

Pedestrian / Bicycle Activity

The number of pedestrians and bicyclists at the SR 49 / SR 193 intersection was determined as part of the Saturday traffic counts conducted in August 2020. During the two-hour period from the noon to 2:00 period a total of 6 pedestrian crossings were recorded. There were two pedestrians in each direction on the south leg of the intersection and 2 pedestrians who walked southbound on the west side of the intersection.

The number of bicyclists was also determined at that time. A total of 4 bicyclists entered the intersection traveling eastbound and 2 entered traveling westbound.

Collision History

This evaluation was also presented in the original report. Traffic collision information was obtained for locations on SR 49 for the period of January 1, 2016 to December 31, 2018. During that time period a total of one collision was reported for the segment from 300 feet south of SR 193 to 300 feet north of St Florian Court. One rear-end collision occurred 65 feet south of SR 193. The statewide average collision rate for rural three-lane roads (i.e., with TWLT lane) is 0.94 per Million Vehicle Miles (MVM). Over three years this ¼ mile long segment experienced a rate of 0.42 per MVM.

PROJECT CHARACTERISTICS

Trip Generation

Trip Generation Rates. The Institute of Transportation Engineers (ITE) publication *"Trip Generation, 10th Edition"* provides information for the use most similar to Dollar General Store (i.e., "Variety Store" (Code 814)). Table 5 identifies the trip generation rates reported by ITE for this use.

No specific rates are available for Saturdays. Information is available for the hour with the highest volume of project weekday traffic, which is called the "peak hour of the generator". This rate has been employed to estimate the project's traffic on the Saturday peak hour, and the applicable rate is noted in Table 5.

TABLE 5
TRIP GENERATION RATES

			Peak Hour of Adjacent Street						PM Peak Hour of Generator		
			AM Peak Hour			PM Peak Hour					
Land Use / Source	Unit	Daily	In	Out	Total	In	Out	Total	In	Out	Total
Variety Store (814)	ksf	63.47	57%	43%	3.18	52%	48%	6.82	50%	50%	7.42
Dollar General Store	9.1 ksf	578	16	13	29	32	30	62	34	34	68
Pass-by Trips	34%	<196>	<5>	<5>	<10>	<10>	<10>	<20>	<12>	<12>	<24>
Net New Trips		382	11	8	19	22	20	42	22	22	44

Source: ITE Trip Generation, 10th Edition

Trip Generation Forecasts. Table 5 displays the p.m. peak hour of the generator trip generation forecasts for the 9.1 ksf Dollar General Store. The project would generate 68 p.m. peak hour trips at its driveway. A portion of the traffic drawn to these stores would be drawn from the stream of traffic already passing the site. The ITE *Trip Generation Handbook, 3rd Edition* notes that 34% of the weekday p.m. trips are "pass-by", and this rate has been assumed for Saturday.

As noted in Table 5, the project is expected to generate 44 "new" trips during the p.m. peak hour of the generator that is being used for this analysis of Saturday conditions.

Vehicle Trip Distribution / Assignment

The distribution of project traffic on Saturday was assumed to be consistent with the assumption made for weekdays that was used in the original report. As noted in Table 6, assuming a primary trade area that extends 1-2 miles from the site, the new trips attracted to the site will arrive primarily from the south along SR 49 and east along SR 193, with lesser shares arriving from the north and from the businesses that already exist along SR 49. Pass-by trips will be drawn from passing traffic on SR 49 in general proportion to the current peak hour volumes from each direction.

TABLE 6
DIRECTIONAL TRIP DISTRIBUTION (NEW TRIPS)

Direction	Route	Percentage of New Trips
North	SR 49 north of Northside Drive	10%
East	SR 193 east of SR 49	40%
South	SR 49 south of Northside Drive	40%
West	Local businesses	10%
Total		100%

Using the trip generation and distribution assumptions described above, the trips generated by the proposed project were assigned to the study area street system.

PROJECT TRAFFIC EFFECTS

Existing Plus Project Saturday Traffic Conditions and Levels of Service

Figure 4 superimposes project trips onto the current background Saturday traffic volumes to create the "Existing plus Project" condition. Subsequent tables compare the "Existing" and "Existing plus Project" Levels of Service.

Project Traffic Impacts to Level of Service at Intersections. As shown in Table 7, because the amount of traffic projected to be generated by the project is relatively low, the addition of project traffic would not appreciably increase the length of delays already occurring at study intersections, and the project does not result in any change to the overall Level of Service at each location. Levels of Service will remain within adopted minimum standards of El Dorado County at each location.

As noted, to provide a "worst case" assessment, the Level of Service at the site access has been calculated assuming the Dollar General Store driveway and the USPS driveway are combined as one consolidated intersection.

Traffic Signal Warrants. The volume of traffic occurring at each intersection with development of the project was again compared to the CA MUTCD peak hour signal warrant thresholds. Traffic signals continue to be warranted at SR 49 / SR 193 with the project. The SR 193 TCR suggests a roundabout will someday be installed at this location, but no funding is identified. Currently, improvements to this intersection are not included in El Dorado County's regional traffic impact fee program.

95th Percentile Queues. Table 8 identifies the 95th percentile queues occurring during the Saturday peak hour at the SR 49 / SR 193 intersection if the project is developed. As indicated, the queue in the southbound left turn lane may increase by about 5 feet as a result of the project. This queue will continue to be accommodated within the limits of the painted left turn lane. No improvements are needed.

Roadway Segments. As noted in Table 9, the project will add traffic to the state highway segments in this area. However, the volume of traffic is too small to have an appreciable effect on the performance of roadway segments. All segments will continue to operate at LOS D, which satisfies the General Plan standard.

TABLE 7
EXISTING PLUS PROJECT INTERSECTION LEVELS OF SERVICE

Intersection	Control	PM Peak Hour				Saturday Peak Hour				Peak Hour Signal Warrant Met?
		Existing No Project		Existing Plus Project		Existing No Project		Existing Plus Project		
		LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	
2. State Route 49 / Northside Dr	WB Stop									No
Southbound left turn		A	7.9	A	7.9	A	8.1	A	8.2	
Westbound approach		C	16.3	C	18.5	C	16.0	C	16.9	
4. State Route 49 / State Route 193	AWS	C	17.7	C	18.8	B	13.9	B	14.5	Yes
6. Northside Dr / USPS / Access	SB/NB Stop									No
Southbound approach		A	8.5	A	8.5	-	--	A	8.4	
Eastbound approach		A	7.1	A	7.3	A	7.2	A	7.2	
Northbound approach		-	--	A	9.9	-	--	A	9.1	

TABLE 8
EXISTING PLUS PROJECT SATURDAY INTERSECTION PEAK HOUR QUEUES

Intersection	Lane	Storage (feet)	Saturday Peak Hour					
			Existing No Project		Existing Plus Project			
			Volume (vph)	95th % Queue (feet)	Volume (vph)		95th % Queue (feet)	Storage Adequate?
					Project Only	Total		
State Route 49 / SR 193	SB left	200[1]	243	75	9	252	80	No
	NB left	150[1]	21	<25	0	21	<25	Yes
	WB approach	unlimited	228	55	9	237	60	Yes

[1]lane continues as TWLT lane

TABLE 9
EXISTING PLUS PROJECT ROADWAY SEGMENT LEVELS OF SERVICE

Road	Location	Direction	Saturday Hour							
			Existing				Plus Project			
			Volume (vph)	ATS (mph)	PTSF (%)	LOS	Volume added (vph)	ATS (mph)	PTSF (%)	LOS
SR 49	North of SR 193 beyond Northside Dr	Northbound	387	40.2	68.7	D	2	40.2	68.6	D
		Southbound	454	40.4	74.3	D	2	40.4	74.4	D
	South of SR 193	Northbound	215	42.1	57.9	D	9	42.0	58.3	D
		Southbound	261	41.8	65.9	D	9	41.7	65.1	D
SR 193	East of SR 49	Eastbound	308	41.3	66.5	D	9	41.4	65.5	D
		Westbound	304	41.3	65.3	D	9	41.2	66.7	D

Project Impacts to Alternative Transportation Modes

Development of the proposed Dollar General Store may incrementally contribute to the demand for facilities to serve pedestrians and cyclists in this area of El Dorado County, but this demand is expected to be relatively minor based on current activity.

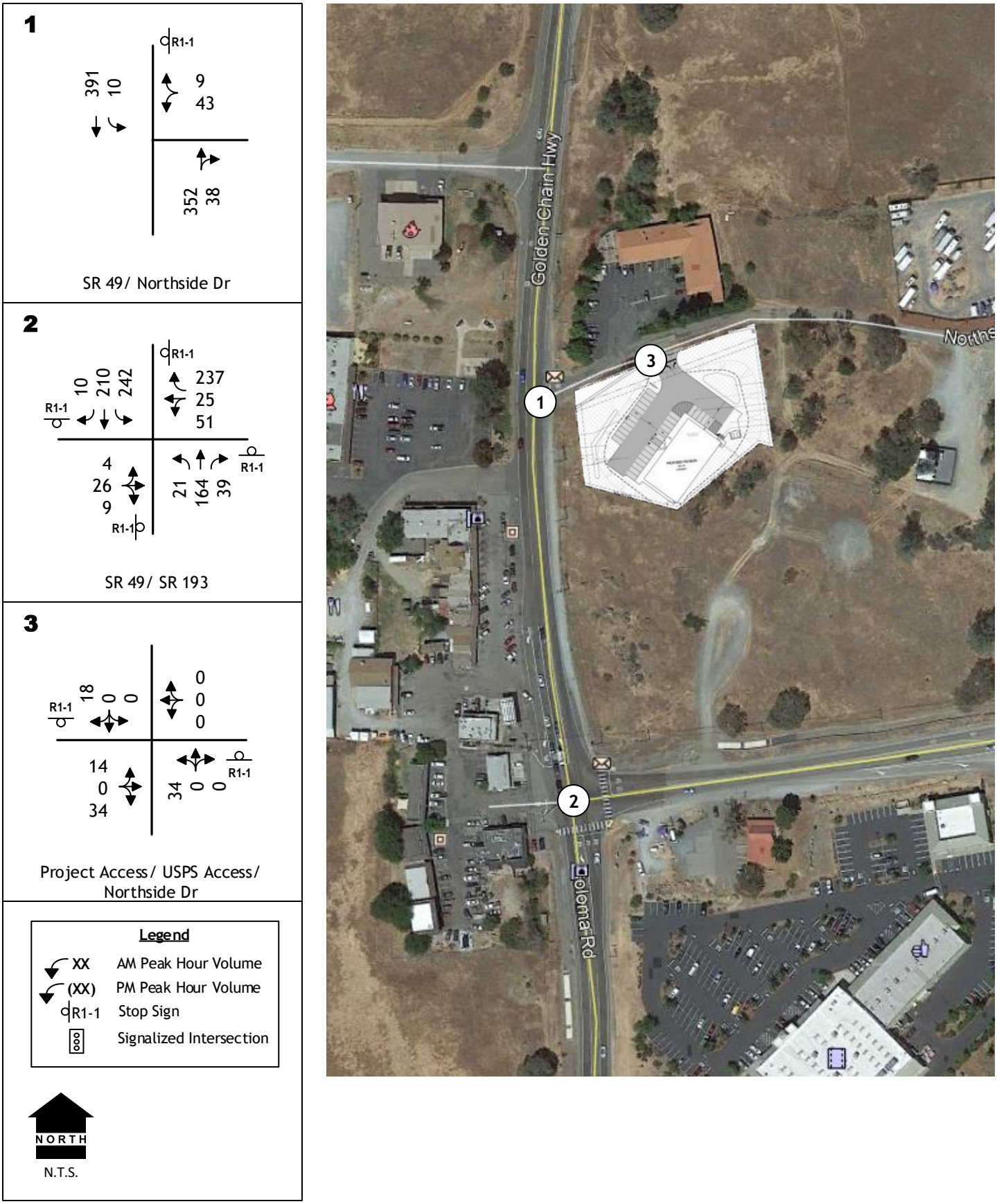
Pedestrian Impacts. Some employees or customers of this project may elect to walk to other commercial uses in the area. Based on the results of Saturday traffic counts current midday pedestrian activity between uses in this area is low. Similarly, the project is not expected to result in appreciable numbers of pedestrians to and from the site.

Bicycle Impacts. While the use of bicycles may be an option for employees or customers to get to the site, based on current Saturday bicycle counts in the area the number of cyclists generated by this use is likely to be low. The number of cyclists associated with this project is not likely to create any appreciable safety impacts on SR 49 where the paved shoulder is already available to provide access to the project.

Site Access

Throat Depth. Access to the site is proposed via a driveway on the south side of Northside Drive. The driveway is 40 feet wide. The main parking aisle is separated from Northside Drive by about 40 feet of throat. Two waiting vehicles can queue prior to blocking access to those parking spaces. This layout is expected to operate satisfactorily given the low traffic volumes projected to be generated by the site.

Proximity of Driveways – Safety. The project driveway and USPS driveway are slightly offset. While offset driveway can sometimes cause conflicts between turning vehicles, the characteristics of the two driveways and the volume of traffic anticipated combine to preclude typical concerns. The Post Office driveway is slightly west of the Dollar General driveway. In this alignment the typical turning conflict would have been between outbound left turns from each driveway who might meet between the intersections. In this case because Northside Drive is a cul-de-sac, all of the traffic observed leaving the Post Office did so by turning right to go back to SR 49. The vehicles would not occupy the same space as left turns from the Dollar General, and no conflict occurs. While an occasional Post Office customer may turn left to visit the Dollar General, the number of potential conflicts between Dollar General traffic and these left turns will be minimal. Sight lines between the two driveways are not obstructed. The anticipated operation of the two driveways will be safe, and no change to the design is warranted.



EXISTING PLUS PROJECT SATURDAY TRAFFIC VOLUMES
AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

9470-02 RA 9/10/2020

figure 4

SUMMARY AND CONCLUSIONS

This supplemental report documents **KD Anderson & Associates'** analysis of the Saturday traffic effects of a Dollar General Store on Northside Drive in El Dorado County, California. The analysis identified current summer Saturday conditions based on new traffic count data that was adjusted to reflect the effects of COVID-19. To assess project effects, the trip generation associated with the highest volume hour rate for the project was determined and superimposed onto the Saturday condition.

Saturday Peak Hour Traffic. Traffic volume data was collected for the midday peak traffic period at the SR 49 / SR 193 intersection and for the SR 49/ Northside Drive intersection. That data was adjusted to reflect summer 2019 conditions using "big data' derived from cell phone GIS activity. The resulting Level of Service and queuing analyses indicated that summer midday Saturday conditions are similar to but no worse than the weekday p.m. peak hour conditions identified in the original report.

Weekend Peak Hour Trip Generation. The ITE Trip Generation Manual, 10th Edition was reviewed to identify Saturday trip generation rates for this use. Because no specific Saturday data was available, the weekday rates associated with the greatest amount of project traffic (i.e., peak hour of generator) were employed. Under these assumptions the Dollar General Store is expected to generate a total of 68 trips during the peak hour. After discounting for pass-by trips already occurring on SR 49 adjacent to the site, the project is projected to generate 44 new primary trips in the peak hour.

Existing Plus Project Saturday Traffic Conditions. Development of the project alone does not result in a significant effect on traffic based on the criteria adopted by El Dorado County. No changes to existing Saturday Levels of Service are projected with development of the site. The Level of Service at the site access and at the SR 49 / Northside Drive intersection will be LOS C or better. Traffic signal warrants are met with and without the project at the SR 49/ SR 193 intersection. Peak period queues with and without the project can be accommodated within existing turn lanes. The current Saturday peak hour roadway segment Levels of Service on state highways near the project will not change as a result of the project.

Safety. Current pedestrian and bicycle volumes were monitored during Saturday midday traffic counts, and use of both transportation modes at the SR 49 / SR 193 intersection are very low (i.e., fewer than 6 pedestrians or 4 bicyclists over two midday hours). As is the case today, any pedestrians for cyclists generated by the Dollar General Store will be able to use the available shoulder on SR 49 and use the crosswalks at the SR 49 / SR 193 intersection.

APPENDIX

(Traffic Counts, LOS Calculations)

Prepared by National Data & Surveying Services

SR 49 & Northside Dr

Peak Hour Turning Movement Count

ID: 20-070147-001
City: Cool

Day: Saturday
Date: 08/29/2020

PEAK HOURS

AM	NONE
NOON	12:30 PM - 01:30 PM
PM	NONE

COUNT PERIODS

AM	NONE
NOON	12:00 PM - 02:00 PM
PM	NONE

SR 49 — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	361	2	0	326	NOON
PM	0	0	0	0	0	PM

Northside Dr — EASTBOUND

AM	NOON	PM	
0	0	0	⇦
0	0	0	↶ 0
0	0	0	→ 0
0	0	0	↷ 0
0	0	0	⇩
AM	NOON	PM	

WESTBOUND — Northside Dr

PM	NOON	AM	
0	1	0	0 ↷
0	0	0	0 ←
0	15	0	0 ↶
0	0	0	0 ↷
0	13	0	⇨
PM	NOON	AM	

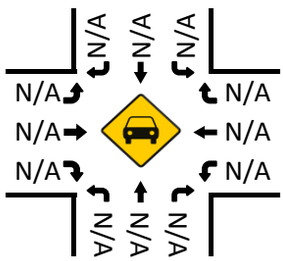
CONTROL: 1 Way Stop (WB)

	AM	NOON	PM
TEV	0	715	0
PHF		0.91	

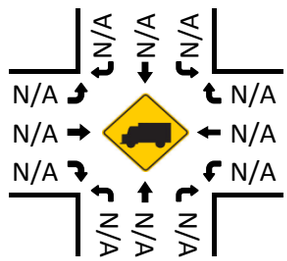
SR 49 — NORTHBOUND

PM	0	0	0	0	0	PM
NOON	376	0	0	325	11	NOON
AM	0	0	0	0	0	AM

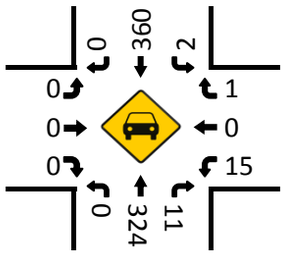
Cars (AM)



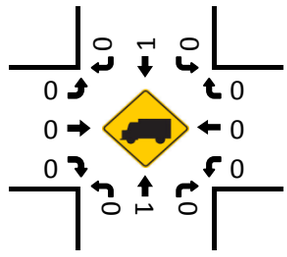
HT (AM)



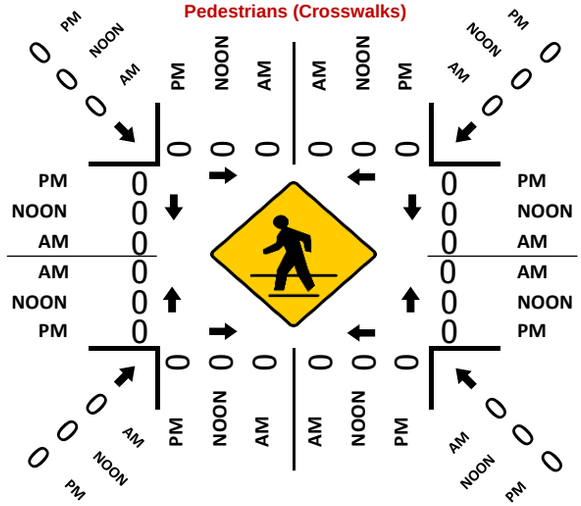
Cars (NOON)



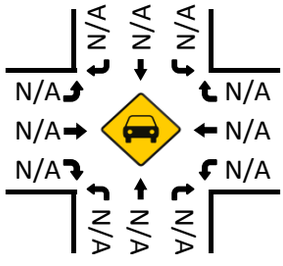
HT (NOON)



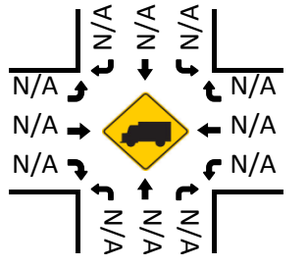
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & Northside Dr
City: Cool
Control: 1 Way Stop (WB)

Project ID: 20-070147-001
Date: 8/29/2020

Total

NS/EW Streets:	SR 49				SR 49				Northside Dr				Northside Dr				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	0	70	3	0	0	88	0	0	0	0	0	0	2	0	2	0	165
12:15 PM	0	84	4	0	5	65	0	0	0	0	0	0	6	0	2	0	166
12:30 PM	0	85	6	0	1	85	0	0	0	0	0	0	9	0	0	0	186
12:45 PM	0	77	1	0	0	85	0	0	0	0	0	0	1	0	0	0	164
1:00 PM	0	83	3	0	1	104	0	0	0	0	0	0	4	0	1	0	196
1:15 PM	0	80	1	0	0	87	0	0	0	0	0	0	1	0	0	0	169
1:30 PM	0	70	3	0	0	80	0	0	0	0	0	0	2	0	1	0	156
1:45 PM	0	73	5	0	0	79	0	0	0	0	0	0	3	0	1	0	161
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	622	26	0	7	673	0	0	0	0	0	0	28	0	7	0	1363
APPROACH %'s :	0.00%	95.99%	4.01%	0.00%	1.03%	98.97%	0.00%	0.00%					80.00%	0.00%	20.00%	0.00%	
PEAK HR :	12:30 PM - 01:30 PM																TOTAL
PEAK HR VOL :	0	325	11	0	2	361	0	0	0	0	0	0	15	0	1	0	715
PEAK HR FACTOR :	0.000	0.956	0.458	0.000	0.500	0.868	0.000	0.000	0.000	0.000	0.000	0.000	0.417	0.000	0.250	0.000	0.912
		0.923				0.864								0.444			

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & Northside Dr
City: Cool
Control: 1 Way Stop (WB)

Project ID: 20-070147-001
Date: 8/29/2020

Cars

NS/EW Streets:	SR 49				SR 49				Northside Dr				Northside Dr				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	0	69	3	0	0	88	0	0	0	0	0	0	2	0	2	0	164
12:15 PM	0	82	4	0	5	65	0	0	0	0	0	0	6	0	2	0	164
12:30 PM	0	85	6	0	1	84	0	0	0	0	0	0	9	0	0	0	185
12:45 PM	0	77	1	0	0	85	0	0	0	0	0	0	1	0	0	0	164
1:00 PM	0	83	3	0	1	104	0	0	0	0	0	0	4	0	1	0	196
1:15 PM	0	79	1	0	0	87	0	0	0	0	0	0	1	0	0	0	168
1:30 PM	0	70	3	0	0	79	0	0	0	0	0	0	2	0	1	0	155
1:45 PM	0	73	5	0	0	78	0	0	0	0	0	0	3	0	1	0	160
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	618	26	0	7	670	0	0	0	0	0	0	28	0	7	0	1356
APPROACH %'s :	0.00%	95.96%	4.04%	0.00%	1.03%	98.97%	0.00%	0.00%					80.00%	0.00%	20.00%	0.00%	
PEAK HR :	12:30 PM - 01:30 PM																TOTAL
PEAK HR VOL :	0	324	11	0	2	360	0	0	0	0	0	0	15	0	1	0	713
PEAK HR FACTOR :	0.00	0.953	0.458	0.000	0.500	0.865	0.000	0.000	0.000	0.000	0.000	0.000	0.417	0.000	0.250	0.000	0.909
		0.920				0.862								0.444			

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & Northside Dr
City: Cool
Control: 1 Way Stop (WB)

Project ID: 20-070147-001
Date: 8/29/2020

HT

NS/EW Streets:	SR 49				SR 49				Northside Dr				Northside Dr				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:15 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
1:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	4	0	0	0	3	0	0	0	0	0	0	0	0	0	0	7
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%									
PEAK HR :	12:30 PM - 01:30 PM																TOTAL
PEAK HR VOL :	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
PEAK HR FACTOR :	0.00	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
		0.250				0.250											

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & Northside Dr
City: Cool
Control: 1 Way Stop (WB)

Project ID: 20-070147-001
Date: 8/29/2020

Bikes

NS/EW Streets:	SR 49				SR 49				Northside Dr				Northside Dr				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :																	
PEAK HR :	12:30 PM - 01:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & Northside Dr
City: Cool

Project ID: 20-070147-001
Date: 8/29/2020

Pedestrians (Crosswalks)

NS/EW Streets:	SR 49		SR 49		Northside Dr		Northside Dr		
NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
12:00 PM	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0
PEAK HR :	**12:30 PM - 01:30 PM**								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

Prepared by National Data & Surveying Services

SR 49 & SR 193/Georgetown Rd

Peak Hour Turning Movement Count

ID: 20-070147-002
City: Cool

Day: Saturday
Date: 08/29/2020

	PEAK HOURS	COUNT PERIODS
AM	NONE	NONE
NOON	12:30 PM - 01:30 PM	12:00 PM - 02:00 PM
PM	NONE	NONE

SR 49 — SOUTHBOUND

	Right	Through	Left	U-Turn	Exit (NB)
AM	0	0	0	0	0
NOON	9	183	221	1	353
PM	0	0	0	0	0
(red)	0	0	0	0	

SR 193/Georgetown Rd — EASTBOUND

	AM	NOON	PM	(red)
Exit (WB)	0	51	0	
U-Turn	0	0	0	0
Left	0	4	0	0
Through	0	24	0	0
Right	0	8	0	0

SR 193/Georgetown Rd — WESTBOUND

	(red)	PM	NOON	AM
Right	0	0	207	0
Through	0	0	23	0
Left	0	0	46	0
U-Turn	0	0	0	0
Exit (EB)		0	280	0

SR 49 — NORTHBOUND

	Exit (SB)	U-Turn	Left	Through	Right
(red)		0	0	0	0
PM	0	0	0	0	0
NOON	237	0	19	141	35
AM	0	0	0	0	0

CONTROL

4 Way Stop

	AM	NOON	PM
TEV	0	921	0
PHF		0.94	

Cars (AM)

Approach	Left	Through	Right
SB	N/A	N/A	N/A
EB	N/A	N/A	N/A
WB	N/A	N/A	N/A
NB	N/A	N/A	N/A

Cars (NOON)

Approach	Left	Through	Right
SB	220	183	9
EB	4	24	8
WB	46	23	206
NB	19	141	35

Cars (PM)

Approach	Left	Through	Right
SB	N/A	N/A	N/A
EB	N/A	N/A	N/A
WB	N/A	N/A	N/A
NB	N/A	N/A	N/A

HT (AM)

Approach	Left	Through	Right
SB	N/A	N/A	N/A
EB	N/A	N/A	N/A
WB	N/A	N/A	N/A
NB	N/A	N/A	N/A

HT (NOON)

Approach	Left	Through	Right
SB	1	0	0
EB	0	0	0
WB	0	0	1
NB	0	0	0

HT (PM)

Approach	Left	Through	Right
SB	N/A	N/A	N/A
EB	N/A	N/A	N/A
WB	N/A	N/A	N/A
NB	N/A	N/A	N/A

Pedestrians (Crosswalks)

Crosswalk	Direction	AM	NOON	PM
North	Eastbound	0	0	0
North	Westbound	0	0	0
West	Southbound	0	2	0
West	Northbound	0	0	0
East	Southbound	0	0	0
East	Northbound	0	0	0
South	Eastbound	0	2	0
South	Westbound	0	2	0
NW diagonal		0	0	0
NE diagonal		0	0	0
SW diagonal		0	0	0
SE diagonal		0	0	0

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & SR 193/Georgetown Rd
City: Cool
Control: 4 Way Stop

Project ID: 20-070147-002
Date: 8/29/2020

Total

NS/EW Streets:	SR 49				SR 49				SR 193/Georgetown Rd				SR 193/Georgetown Rd				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	5	29	9	0	57	41	4	1	3	12	3	0	9	2	46	0	221
12:15 PM	6	40	12	0	44	42	0	2	1	3	4	0	10	5	54	0	223
12:30 PM	7	37	7	0	50	43	2	0	0	7	2	0	13	6	58	0	232
12:45 PM	5	33	5	0	50	48	3	0	2	5	3	0	11	7	47	0	219
1:00 PM	6	41	9	0	65	53	0	0	0	8	0	0	12	3	47	0	244
1:15 PM	1	30	14	0	56	39	4	1	2	4	3	0	10	7	55	0	226
1:30 PM	3	22	16	0	49	34	1	2	0	5	4	0	10	6	48	0	200
1:45 PM	2	37	14	0	54	35	2	0	1	4	1	0	12	2	48	1	213
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	35	269	86	0	425	335	16	6	9	48	20	0	87	38	403	1	1778
APPROACH %'s :	8.97%	68.97%	22.05%	0.00%	54.35%	42.84%	2.05%	0.77%	11.69%	62.34%	25.97%	0.00%	16.45%	7.18%	76.18%	0.19%	
PEAK HR :	12:30 PM - 01:30 PM																TOTAL
PEAK HR VOL :	19	141	35	0	221	183	9	1	4	24	8	0	46	23	207	0	921
PEAK HR FACTOR :	0.679	0.860	0.625	0.000	0.850	0.863	0.563	0.250	0.500	0.750	0.667	0.000	0.885	0.821	0.892	0.000	0.944
	0.871				0.877				0.900				0.896				

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & SR 193/Georgetown Rd
City: Cool
Control: 4 Way Stop

Project ID: 20-070147-002
Date: 8/29/2020

Cars

NS/EW Streets:	SR 49				SR 49				SR 193/Georgetown Rd				SR 193/Georgetown Rd				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	5	29	9	0	57	41	4	1	3	12	3	0	9	2	45	0	220
12:15 PM	6	39	12	0	44	42	0	2	1	3	4	0	10	5	53	0	221
12:30 PM	7	37	7	0	49	43	2	0	0	7	2	0	13	6	58	0	231
12:45 PM	5	33	5	0	50	48	3	0	2	5	3	0	11	7	47	0	219
1:00 PM	6	41	9	0	65	53	0	0	0	8	0	0	12	3	47	0	244
1:15 PM	1	30	14	0	56	39	4	1	2	4	3	0	10	7	54	0	225
1:30 PM	3	22	16	0	48	34	1	2	0	5	4	0	10	6	48	0	199
1:45 PM	2	37	14	0	54	34	2	0	1	4	1	0	12	2	48	1	212
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	35	268	86	0	423	334	16	6	9	48	20	0	87	38	400	1	1771
APPROACH %'s :	9.00%	68.89%	22.11%	0.00%	54.30%	42.88%	2.05%	0.77%	11.69%	62.34%	25.97%	0.00%	16.54%	7.22%	76.05%	0.19%	
PEAK HR :	12:30 PM - 01:30 PM																TOTAL
PEAK HR VOL :	19	141	35	0	220	183	9	1	4	24	8	0	46	23	206	0	919
PEAK HR FACTOR :	0.68	0.860	0.625	0.000	0.846	0.863	0.563	0.250	0.500	0.750	0.667	0.000	0.885	0.821	0.888	0.000	0.942
	0.871				0.875				0.900				0.893				

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & SR 193/Georgetown Rd
City: Cool
Control: 4 Way Stop

Project ID: 20-070147-002
Date: 8/29/2020

HT

NS/EW Streets:	SR 49				SR 49				SR 193/Georgetown Rd				SR 193/Georgetown Rd				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
12:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
12:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
1:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	0	0	2	1	0	0	0	0	0	0	0	0	3	0	7
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	66.67%	33.33%	0.00%	0.00%					0.00%	0.00%	100.00%	0.00%	
PEAK HR :	**12:30 PM - 01:30 PM**																TOTAL
PEAK HR VOL :	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.500
						0.250									0.250		

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & SR 193/Georgetown Rd
City: Cool
Control: 4 Way Stop

Project ID: 20-070147-002
Date: 8/29/2020

Bikes

NS/EW Streets:	SR 49				SR 49				SR 193/Georgetown Rd				SR 193/Georgetown Rd				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	3
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	4
APPROACH %'s :									0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	12:30 PM - 01:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250
														0.250			

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & SR 193/Georgetown Rd
City: Cool

Project ID: 20-070147-002
Date: 8/29/2020

Pedestrians (Crosswalks)

NS/EW Streets:	SR 49		SR 49		SR 193/Georgetown Rd		SR 193/Georgetown Rd		
NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
12:00 PM	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	2	2	0	0	0	2	6
1:00 PM	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	2	2	0	0	0	2	6
APPROACH %'s :			50.00%	50.00%			0.00%	100.00%	
PEAK HR :	**12:30 PM - 01:30 PM**								TOTAL
PEAK HR VOL :	0	0	2	2	0	0	0	2	6
PEAK HR FACTOR :			0.250	0.250				0.250	0.250
			0.250				0.250		

Day Type

2: Weekend Day (Sa-Sa)

TURNING MOVEMENT COUNTS - SATURDAY 2018_2019 - JULY AUGUST

	Cool D/W West Leg EB In			SR 193 East Leg WB Inbound			SR 49 South Leg NB Inbound			SR 49 North Leg SB Inbound			
Day Part	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	Total
0: All Day (12am-12am)	63	259	118	656	445	2,899	447	2,541	560	3,059	2,363	51	13,461
1: 11am (11am-12noon)	-	18	-	73	58	248	58	192	55	174	217	-	1,093
2: 12pm (12noon-1pm)	-	12	-	56	22	248	8	142	48	188	225	-	949
3: 1pm (1pm-2pm)	17	57	8	49	47	229	35	179	32	212	157	-	1,022
4: 2pm (2pm-3pm)	-	11	13	25	24	137	19	185	25	226	194	-	859
5: 3pm (3pm-4pm)	-	29	22	32	27	181	11	241	41	216	155	-	955
6: 4pm (4pm-5pm)	-	24	56	31	23	154	12	164	44	227	156	-	891
7: 5pm (5pm-6pm)	-	12	-	40	13	170	18	181	55	249	143	-	881
	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-

TURNING MOVEMENT PERCENTAGE

	Cool D/W West Leg EB In			SR 193 East Leg WB Inbound			SR 49 South Leg NB Inbound			SR 49 North Leg SB Inbound		
Day Part	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right
0: All Day (12am-12am)	14%	59%	27%	16%	11%	72%	13%	72%	16%	56%	43%	1%
1: 11am (11am-12noon)	0%	100%	0%	19%	15%	65%	19%	63%	18%	45%	55%	0%
2: 12pm (12noon-1pm)	0%	100%	0%	17%	7%	76%	4%	72%	24%	46%	54%	0%
3: 1pm (1pm-2pm)	21%	70%	10%	15%	14%	70%	14%	73%	13%	57%	43%	0%
4: 2pm (2pm-3pm)	0%	46%	54%	13%	13%	74%	8%	81%	11%	54%	46%	0%
5: 3pm (3pm-4pm)	0%	57%	43%	13%	11%	75%	4%	82%	14%	58%	42%	0%
6: 4pm (4pm-5pm)	0%	30%	70%	15%	11%	74%	5%	75%	20%	59%	41%	0%
7: 5pm (5pm-6pm)	0%	100%	0%	18%	6%	76%	7%	71%	22%	64%	36%	0%
	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-

Day Type

2: Weekend Day (Sa-Sa)

TURNING MOVEMENT COUNTS - SATURDAY 2020 - JULY AUGUST

Day Part	Cool D/W West Leg EB In			SR 193 East Leg WB Inbound			SR 49 South Leg NB Inbound			SR 49 North Leg SB Inbound			Total
	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	
0: All Day (12am-12am)	87	260	73	615	524	2,077	74	1,982	554	2,439	2,148	45	10,878
1: 11am (11am-12noon)	-	30	-	64	35	277	-	132	55	153	193	24	963
2: 12pm (12noon-1pm)	18	-	70	25	31	220	-	167	34	278	158	-	1,001
3: 1pm (1pm-2pm)	-	85	-	16	-	178	30	135	3	148	232	-	827
4: 2pm (2pm-3pm)	-	31	-	26	58	140	-	157	32	215	216	-	875
5: 3pm (3pm-4pm)	26	34	-	83	29	132	-	134	49	208	236	-	931
6: 4pm (4pm-5pm)	-	-	-	27	28	92	-	163	73	203	154	-	740
7: 5pm (5pm-6pm)	-	-	-	31	-	103	-	85	47	138	130	-	534
	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-

TURNING MOVEMENT PERCENTAGE

Day Part	Cool D/W West Leg EB In			SR 193 East Leg WB Inbound			SR 49 South Leg NB Inbound			SR 49 North Leg SB Inbound		
	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right
0: All Day (12am-12am)	21%	62%	17%	19%	16%	65%	3%	76%	21%	53%	46%	1%
1: 11am (11am-12noon)	0%	100%	0%	17%	9%	74%	0%	71%	29%	41%	52%	6%
2: 12pm (12noon-1pm)	20%	0%	80%	9%	11%	80%	0%	83%	17%	64%	36%	0%
3: 1pm (1pm-2pm)	0%	100%	0%	8%	0%	92%	18%	80%	2%	39%	61%	0%
4: 2pm (2pm-3pm)	0%	100%	0%	12%	26%	63%	0%	83%	17%	50%	50%	0%
5: 3pm (3pm-4pm)	43%	57%	0%	34%	12%	54%	0%	73%	27%	47%	53%	0%
6: 4pm (4pm-5pm)	-	-	-	18%	19%	63%	0%	69%	31%	57%	43%	0%
7: 5pm (5pm-6pm)	-	-	-	23%	0%	77%	0%	64%	36%	51%	49%	0%
	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	1	358	12	2	397
Future Vol, veh/h	17	1	358	12	2	397
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	130	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	1	389	13	2	432

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	832	396	0	0	402	0
Stage 1	396	-	-	-	-	-
Stage 2	436	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	339	653	-	-	1157	-
Stage 1	680	-	-	-	-	-
Stage 2	652	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	338	653	-	-	1157	-
Mov Cap-2 Maneuver	338	-	-	-	-	-
Stage 1	680	-	-	-	-	-
Stage 2	651	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	347	1157	-
HCM Lane V/C Ratio	-	-	0.056	0.002	-
HCM Control Delay (s)	-	-	16	8.1	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Intersection Delay, s/veh	13.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	26	9	51	25	228	21	155	39	243	201	10
Future Vol, veh/h	4	26	9	51	25	228	21	155	39	243	201	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	28	10	55	27	248	23	168	42	264	218	11
Number of Lanes	0	1	0	0	1	1	1	1	1	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	1
HCM Control Delay	11.1	13.1	12.4	15.3
HCM LOS	B	B	B	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	10%	67%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	67%	33%	0%	0%	100%	0%
Vol Right, %	0%	0%	100%	23%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	21	155	39	39	76	228	243	201	10
LT Vol	21	0	0	4	51	0	243	0	0
Through Vol	0	155	0	26	25	0	0	201	0
RT Vol	0	0	39	9	0	228	0	0	10
Lane Flow Rate	23	168	42	42	83	248	264	218	11
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.048	0.33	0.075	0.09	0.166	0.426	0.513	0.394	0.017
Departure Headway (Hd)	7.57	7.06	6.346	7.623	7.228	6.19	6.994	6.486	5.774
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	470	505	560	473	493	577	512	551	615
Service Time	5.368	4.857	4.143	5.323	5.015	3.976	4.775	4.267	3.554
HCM Lane V/C Ratio	0.049	0.333	0.075	0.089	0.168	0.43	0.516	0.396	0.018
HCM Control Delay	10.8	13.3	9.7	11.1	11.5	13.6	17	13.5	8.7
HCM Lane LOS	B	B	A	B	B	B	C	B	A
HCM 95th-tile Q	0.2	1.4	0.2	0.3	0.6	2.1	2.9	1.9	0.1

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	14	0	0	0	0	0	0	0	0	0	0	18
Future Vol, veh/h	14	0	0	0	0	0	0	0	0	0	0	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	0	0	0	0	0	0	0	0	0	0	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	0	0	0	41	31	0	31	31	1
Stage 1	-	-	-	-	-	-	30	30	-	1	1	-
Stage 2	-	-	-	-	-	-	11	1	-	30	30	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	-	-	-	963	862	-	977	862	1084
Stage 1	-	-	-	-	-	-	987	870	-	1022	895	-
Stage 2	-	-	-	-	-	-	1010	895	-	987	870	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	-	-	-	939	854	-	-	854	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	939	854	-	-	854	-
Stage 1	-	-	-	-	-	-	978	862	-	1013	895	-
Stage 2	-	-	-	-	-	-	992	895	-	978	862	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	7.2	0	0	
HCM LOS			A	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1622	-	-	-	-	-	-
HCM Lane V/C Ratio	-	0.009	-	-	-	-	-	-
HCM Control Delay (s)	0	7.2	0	-	0	-	-	-
HCM Lane LOS	A	A	A	-	A	-	-	-
HCM 95th %tile Q(veh)	-	0	-	-	-	-	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	43	9	352	38	10	391
Future Vol, veh/h	43	9	352	38	10	391
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	130	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	10	383	41	11	425

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	851	404	0	0	424	0
Stage 1	404	-	-	-	-	-
Stage 2	447	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	330	647	-	-	1135	-
Stage 1	674	-	-	-	-	-
Stage 2	644	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	327	647	-	-	1135	-
Mov Cap-2 Maneuver	327	-	-	-	-	-
Stage 1	674	-	-	-	-	-
Stage 2	638	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.9	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	358	1135	-
HCM Lane V/C Ratio	-	-	0.158	0.01	-
HCM Control Delay (s)	-	-	16.9	8.2	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0	-

Intersection	
Intersection Delay, s/veh	14.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	26	9	51	25	237	21	164	39	252	210	10
Future Vol, veh/h	4	26	9	51	25	237	21	164	39	252	210	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	28	10	55	27	258	23	178	42	274	228	11
Number of Lanes	0	1	0	0	1	1	1	1	1	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	1
HCM Control Delay	11.3	13.7	13	16.1
HCM LOS	B	B	B	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	10%	67%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	67%	33%	0%	0%	100%	0%
Vol Right, %	0%	0%	100%	23%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	21	164	39	39	76	237	252	210	10
LT Vol	21	0	0	4	51	0	252	0	0
Through Vol	0	164	0	26	25	0	0	210	0
RT Vol	0	0	39	9	0	237	0	0	10
Lane Flow Rate	23	178	42	42	83	258	274	228	11
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.049	0.36	0.077	0.092	0.171	0.458	0.539	0.417	0.018
Departure Headway (Hd)	7.777	7.266	6.55	7.776	7.435	6.396	7.197	6.688	5.975
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	462	497	548	462	486	567	504	541	603
Service Time	5.501	4.99	4.275	5.502	5.135	4.096	4.897	4.388	3.675
HCM Lane V/C Ratio	0.05	0.358	0.077	0.091	0.171	0.455	0.544	0.421	0.018
HCM Control Delay	10.9	14	9.8	11.3	11.7	14.4	18	14.1	8.8
HCM Lane LOS	B	B	A	B	B	B	C	B	A
HCM 95th-tile Q	0.2	1.6	0.2	0.3	0.6	2.4	3.2	2	0.1

Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	14	0	34	0	0	0	34	0	0	0	0	18
Future Vol, veh/h	14	0	34	0	0	0	34	0	0	0	0	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	0	37	0	0	0	37	0	0	0	0	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	37	0	0	60	50	19	50	68	1
Stage 1	-	-	-	-	-	-	49	49	-	1	1	-
Stage 2	-	-	-	-	-	-	11	1	-	49	67	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1574	-	-	936	841	1059	950	823	1084
Stage 1	-	-	-	-	-	-	964	854	-	1022	895	-
Stage 2	-	-	-	-	-	-	1010	895	-	964	839	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1574	-	-	913	833	1059	943	816	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	913	833	-	943	816	-
Stage 1	-	-	-	-	-	-	955	846	-	1013	895	-
Stage 2	-	-	-	-	-	-	992	895	-	955	831	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.1	0	9.1	8.4
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	913	1622	-	-	1574	-	-	1084
HCM Lane V/C Ratio	0.04	0.009	-	-	-	-	-	0.018
HCM Control Delay (s)	9.1	7.2	0	-	0	-	-	8.4
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

TRAFFIC IMPACT ANALYSIS

FOR

COOL DOLLAR GENERAL STORE
El Dorado County, California

Prepared For:

WoodCrest Companies
1410 Main Street, Suite C
Ramona, CA 92065

Prepared By:

KD Anderson & Associates, Inc.
3853 Taylor Road, Suite G
Loomis, CA 95650
(916) 660-1555

Revised March 9, 2020
July 24, 2019

Job No. 9470-02

TRAFFIC IMPACT ANALYSIS FOR
COOL DOLLAR GENERAL STORE
El Dorado County, California

TABLE OF CONTENTS

INTRODUCTION **1**
Project Description 1

EXISTING SETTING **4**
Study Area Circulation System - Roads 4
Study Area Intersections 4
Standards of Significance: Levels of Service - Methodology 5
Existing Traffic Volumes / Levels of Service 9
Collision History 13
Alternative Transportation Modes 13
Regulatory Setting 13

PROJECT CHARACTERISTICS **14**
Trip Generation 14
Vehicle Trip Distribution / Assignment 15

PROJECT TRAFFIC IMPACTS **17**
Existing Plus Project Traffic Conditions and Levels of Service 17
Project Impacts to Alternative Transportation Modes 20
Site Access 20

CUMULATIVE IMPACTS **22**
Year 2040 Long Term Cumulative Conditions 22

SUMMARY AND CONCLUSIONS **28**

APPENDIX **30**

KDA

TRAFFIC IMPACT ANALYSIS FOR
COOL DOLLAR GENERAL STORE
El Dorado County, California

INTRODUCTION

This report documents **KD Anderson & Associates'** analysis of the traffic impacts associated with developing a Dollar General Store in the rural El Dorado County community of Cool, California. This assessment of traffic impacts has been required by Caltrans District 3. The analysis identifies both current and future background conditions at key intersections in the vicinity of the site. To assess traffic impacts, the characteristics of the proposed project have been determined, including estimated trip generation and the directional distribution / assignment of project generated traffic. The extent of off-site impacts has been determined, and the adequacy of site access has been evaluated.

Project impacts have been quantified at the following study intersections:

1. SR 49/ St Florian Ct
2. SR 49/ Northside Dr
3. SR 49/ Commercial Driveway (south of Northside Drive)
4. SR 49/ SR 193
5. USPS Driveway/ Northside Dr
6. Project Driveway/ Northside Dr

Project Description

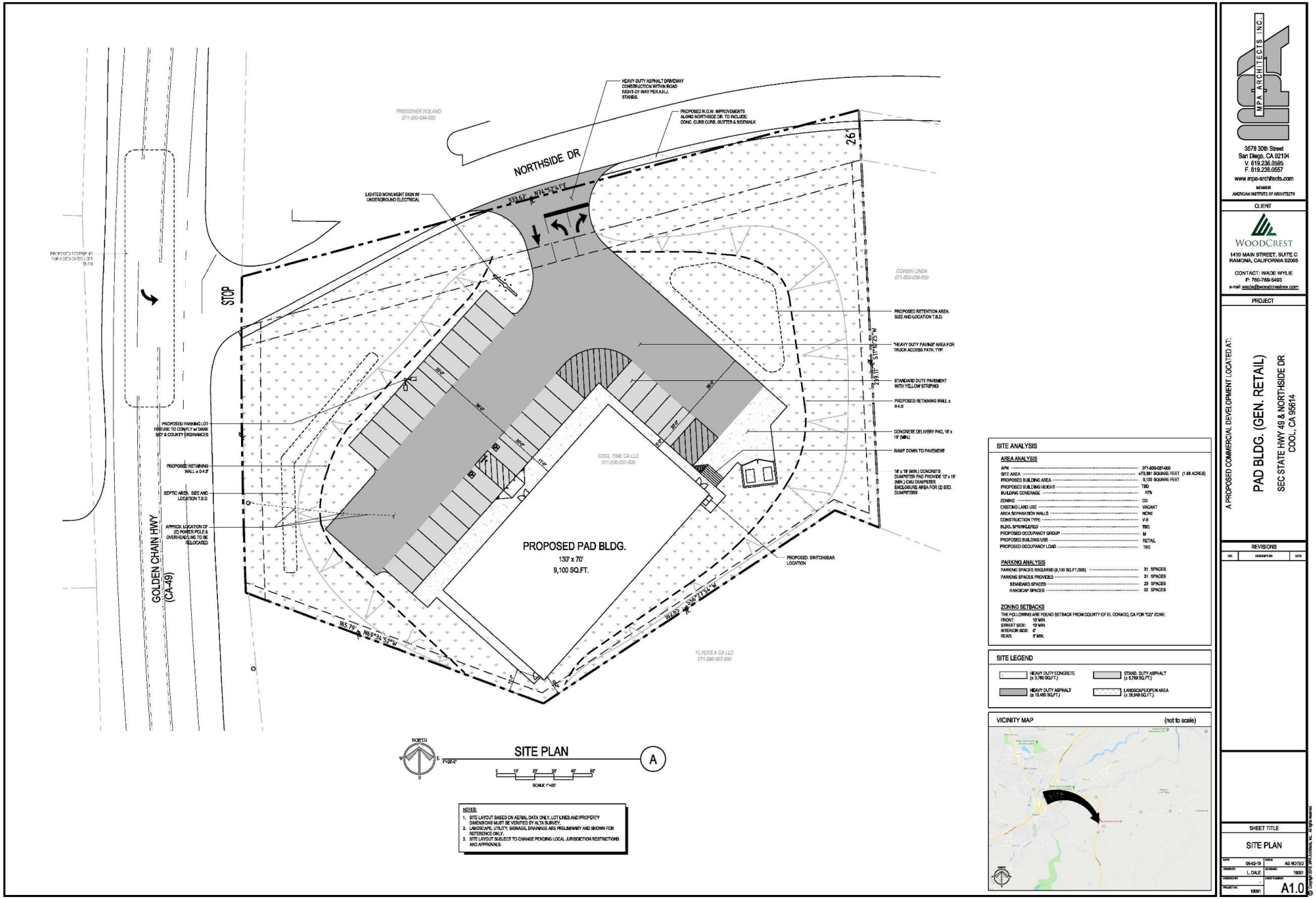
The proposed project consists of a 9.1 ksf Dollar General Store located on an approximately 1.68 acre site on the south side of Northside Drive about 190 feet east of SR 49 (centerline to centerline). The project will include development of 31 parking spaces per El Dorado County Zoning Ordinance requirements. Access to the site will be provided via a single driveway on Northside Drive. The driveway is about 35 feet from the USPS Driveway to the west and is about 655 feet from the Cool Boat and RV Storage across Northside Drive to the east. The project's Northside Drive frontage is currently unimproved, and other than access improvements development of the project will not include any other improvements along the Northside Drive frontage. Figures 1 and 2 display the regional location of the project and proposed site plan, respectively.

VICINITY MAP

KD Anderson & Associates, Inc.
Transportation Engineers

9470-02 RA 3/9/2020

figure 1



KD Anderson & Associates, Inc.
Transportation Engineers

9470-02 RA 3/9/2020

SITE PLAN

figure 2

EXISTING SETTING

This report section describes the facilities that are available today serving vehicular, pedestrian and bicycle traffic and transit users in El Dorado County, as well as policies that guide consideration of traffic impacts.

Study Area Circulation System - Roads

The text which follows provides information regarding the streets included in the study area.

State Route 49 (SR 49) serves north-south traffic throughout the Sierra Nevada foothills. In and near El Dorado County, State Route 49 runs from Plymouth in Amador County through Diamond Springs, Placerville, Coloma, Pilot Hill, and Cool to Auburn in Placer County. The portion of State Route 49 between Cool and Auburn contains sections that are narrow, winding, and steep. In the vicinity of the site, SR 49 is a 2-lane facility with no frontage improvements. The posted speed limit is 45 mph near the site and transitions to 55 mph further north. The most recent traffic volume counts published by Caltrans indicate that SR 49 carries an Annual Average Daily Traffic (AADT) volume of 8,800 vehicles per day north of SR 193, and trucks comprise 4% of the daily volume.

Northside Drive is a 2-lane Local street that intersects State Route 49 approximately 600 feet north of SR 193.

State Route 193 (SR 193) runs easterly from SR 49 in Cool to an intersection on SR 49 north of Placerville. The two-lane highway is generally far narrower than the Caltrans standard for this type of highway, except for a wider section near Georgetown and a narrower, steep, and winding section north of Placerville. In the vicinity of the site, SR 193 is a 2-lane facility with no frontage improvements, although a separated bike path exists along the northside of the road. The posted speed limit is 55 mph. The most recent traffic volume counts published by Caltrans indicate that SR 193 carries 7,600 AADT east of SR 49, and trucks comprise 6% of the daily volume.

Study Area Intersections

The quality of traffic flow is often governed by the operation of key intersections. The following intersections have been identified for evaluation in this study in consultation with El Dorado County and Caltrans staff.

The **State Route 49 / St Florian Court intersection** is a "Tee" intersection controlled by an eastbound stop sign on St Florian Court. A northbound left turn lane is present on SR 49. The St Florian Court approach is a single lane, and there are no crosswalks present.

The **State Route 49 / Northside Drive intersection** is a "Tee" intersection controlled by a westbound stop sign on Northside Drive. A Two-Way-Left-Turn-Lane is present on SR 49. The Northside Drive approach is a single lane, and there are no crosswalks present.

The **State Route 49 / Commercial Driveway intersection** is a "Tee" controlled by a stop sign on eastbound Commercial Driveway. A Two-Way-Left-Turn-Lane is present on SR 49. The Commercial Driveway is a private drive, and there are no crosswalks present.

The **State Route 49 / State Route 193 intersection** is a four-way intersection controlled by an all-way stop with an overhead flasher. SR 49 has separate left turn lanes on each approach. A southbound right turn lane exists, and the northbound thru lane is wide enough to allow right turns outside of the queue of northbound traffic. The SR 193 westbound approach is wide enough to act as a combined left-thru lane and a separate right turn lane, and the eastbound leg is a single lane private drive. Crosswalks exist on the south and east side of the intersection.

The **USPS Driveway / Northside Drive intersection** is a "Tee" controlled by a stop sign on the southbound USPS Driveway. There are no auxiliary lanes or crosswalks present.

Standards of Significance: Levels of Service - Methodology

To assess the quality of existing traffic conditions, Levels of Service were calculated at study area intersections and for individual roadway segments. "Level of Service" is a qualitative measure of traffic operating conditions whereby a letter grade "A" through "F", corresponding to progressively worsening traffic operating conditions, is assigned to an intersection or roadway segment. Table 1 presents the characteristics associated with each LOS grade. As shown in Table 1, LOS "A", "B" and "C" are considered satisfactory to most motorists, while LOS "D" is marginally acceptable. LOS "E" and "F" are associated with severe congestion and delay and are unacceptable to most motorists.

Local agencies and Caltrans adopt minimum Level of Service standards for their facilities. El Dorado County identifies LOS E as the acceptable Level of Service for roadway segments and intersections on County roadways and state highways within the unincorporated areas of the County in the Community Regions and LOS D in the Rural Centers and Rural Regions except as specified in the General Plan. The analysis techniques presented in the *Highway Capacity Manual, 6th Edition* were used to calculate Level of Service and to provide a basis for describing existing traffic conditions and evaluating the significance of project traffic impacts.

The SR 49 Transportation Concept Report indicates that the ultimate Concept Level of Service is LOS D, while LOS D is the expectation for SR 193.

TABLE 1
LEVEL OF SERVICE DEFINITIONS

Level of Service	Signalized Intersection	Unsignalized Intersection	Roadway (Daily)
"A"	Uncongested operations, all queues clear in a single-signal cycle. Ave Delay $\leq$ 10 seconds per vehicle	Little or no delay. Ave Delay $\leq$ 10 sec/veh	Completely free flow.
"B"	Uncongested operations, all queues clear in a single cycle. Delay > 10 sec/veh and $\leq$ 20 sec/veh	Short traffic delays. Delay > 10 sec/veh and $\leq$ 15 sec/veh	Free flow, presence of other vehicles noticeable.
"C"	Light congestion, occasional backups on critical approaches. Delay >20 sec/veh and <35 sec/veh	Average traffic delays. Delay > 15 sec/veh and $\leq$ 25 sec/veh	Ability to maneuver and select operating speed affected.
"D"	Significant congestions of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. Delay > 35 sec/veh and < 55 sec/veh	Long traffic delays. Delay > 25 sec/veh and $\leq$ 35 sec/veh	Unstable flow, speeds and ability to maneuver restricted.
"E"	Severe congestion with some long standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). Delay >55 sec and $\leq$ 80 sec/veh	Very long traffic delays, failure, extreme congestion. Delay > 35 sec/veh and $\leq$ 50 sec/veh	At or near capacity, flow quite unstable.
"F"	Total breakdown, stop-and-go operation. Delay > 80 sec/veh	Intersection often blocked by external causes. Delay > 50 sec/veh	Forced flow, breakdown.

Sources: Highway Capacity Manual, 6th Edition, and Transportation Research Board (TRB) Special Report 209.

Level of Service Methods at Intersections. Levels of Service were calculated for different intersection control types using the respective methods presented in the Highway Capacity Manual, 6th Edition (HCM 6 Ed) using SYNCHRO 10.0 software. For intersections controlled by side street stop signs, the reported Level of Service reflects the "worst case" movement, which is typically those motorists waiting to enter the main street.

Traffic Signal Warrants. The extent to which a traffic signal may be justified is determined based on many factors. From the standpoint of traffic impact analysis, signal warrant criteria contained in the *California Manual of Uniform Traffic Control Devices (CA MUTCD)* are employed in order to assess the relative impact of the additional traffic accompanying a development proposal. For this analysis, Warrant 3 (Peak Hour Traffic) has been employed. Variation in warrant requirements occur based on the design speed of the road (i.e., > 40 mph)

and on the location of the intersection (i.e., rural versus urban locations). In this case, rural criteria for roadway speeds above 40 mph have been employed. It is also important to note that other warrants addressing factors such as pedestrian activity and collision history are necessarily considered before a decision is made to install a traffic signal.

Two-Lane Roadway Segment Levels of Service. Two-lane roadways were analyzed using methods presented in the *Highway Capacity Manual 2010 (HCM).*

HCM Classifications. A two-lane highway is an undivided roadway with one lane in each direction. Passing a slower vehicle requires use of the opposing lane as sight distance and gaps in the opposing traffic stream permit. As volumes and geometric restrictions increase, the ability to pass decreases and platoons form. Motorists in platoons are subject to delay because they are unable to pass. The HCM divides these roadways into three types: Class I, Class II and Class III. They are defined as follows:

- *Class I two-lane highways* are highways where motorists expect to travel at relatively high speeds. Two-lane highways that are major intercity routes, primary connectors of major traffic generators, daily commuter routes, or major links in state or national highway networks are generally assigned to Class I. These facilities serve mostly long-distance trips or provide the connections between facilities that serve long-distance trips.

- *Class II two-lane highways* are highways where motorists do not necessarily expect to travel at high speeds. Two-lane highways functioning as access routes to Class I facilities, serving as scenic or recreational routes (and not as primary arterials), or passing through rugged terrain (where high-speed operation would be impossible) are assigned to Class II. Class II facilities most often serve relatively short trips, the beginning or ending portions of longer trips, or trips for which sightseeing plays a significant role.

- *Class III two-lane highways* are highways serving moderately developed areas. They may be portions of a Class I or Class II highway that pass through small towns or developed recreational areas. On such segments, local traffic often mixes with through traffic, and the density of unsignalized roadside access points is noticeably higher than in a purely rural area. Class III highways may also be longer segments passing through more spread-out recreational areas, also with increased roadside densities. Such segments are often accompanied by reduced speed limits that reflect the higher activity level.

Measures of Effectiveness. Three measures of effectiveness are incorporated into the methodology to determine LOS on roadway segments:

1. *Average Travel Speed (ATS)* reflects mobility on a two-lane highway. It is defined as the highway segment length divided by the average travel time taken by vehicles to traverse it during a designated time interval.

2. *Percent Time Spent Following (PTSF)* represents the freedom to maneuver and the comfort and convenience of travel. It is the average percentage of time that vehicles must travel in platoons behind slower vehicles due to the inability to pass. Because this characteristic is difficult to measure in the field, a surrogate measure is the percentage of vehicles traveling at headways of less than 3.0 at a representative location within the highway segment. PTSF also represents the approximate percentage of vehicles traveling in platoons.

3. *Percent of free-flow speed (PFFS)* represents the ability of vehicles to travel at or near the posted speed limit.

Speed and delay due to passing restrictions are both assumed to be important to motorists on Class I two-lane highways, and therefore, LOS is defined in terms of both ATS and PTSF on these facilities. Travel speed is not necessarily a significant issue on Class II highways, and LOS is defined in only terms of PTSF on these highways. High speeds are not expected on Class III highways, and since the length of the Class III segments may generally be limited, passing restrictions are also not a major concern. On Class III segments drivers are expected to want to travel at or near the speed limit. Therefore, PFFS is used to define LOS for Class III roads. The LOS criteria for two-lane highways within these three measures are shown in Table 2.

TABLE 2
LOS THRESHOLD FOR TWO-LANE HIGHWAYS

	Class I Highways		Class II Highways	Class III Highways
LOS	**ATS (mi / hr)**	**PTSF (%)**	**PTSF (%)**	**PFFS (%)**
A	>55	≤35	≤40	>91.7
B	>50-55	>35-50	>40-55	>83.3 – 91.7
C	>45-50	>50-65	>55-70	>75.0 – 83.3
D	>40-45	>65-80	>70-85	>66.7 – 75.0
E	≤40	>80	>85	≤66.7
Source: HCM 2010, Chapter 15, December 2010				

Standards of Significance. El Dorado County guidelines identify criteria for determining the significance of traffic impacts. A traffic impact is considered to be significant under El Dorado County guidelines if the project causes an intersection to change from LOS D to LOS E. Worsening of conditions at facilities already operating at unacceptable levels of service is also considered a significant impact. The County's General Plan Policy TC-Xe defines "worsen" as any of the following conditions:

a. a 2% increase in traffic during the a.m. peak hour, p.m. peak hour or daily trips, or
b. the addition of 100 or more daily trips, or
c. the addition of 10 or more trips during the a.m. peak hour or the p.m. peak hour.

The County's current General Plan Policy TC-Xf notes that for all residential subdivisions of five or more parcels that worsens traffic on a County road as defined in Policies TC-Xe [A], [B] or [C] "the County shall condition the project to construct all road improvements necessary to maintain or attain Level of Service standards detailed in this Transportation and Circulation Element based on existing traffic plus traffic generated from the development plus forecasted traffic growth at 10-years from project submittal." For all other discretionary projects that worsen traffic "the County shall condition the project to construct all road improvements necessary to maintain or attain adopted LOS standards."

However, the El Dorado County Superior Court issued a ruling in July 2017 that found certain provisions in Measure E unconstitutional. The court ruled that the previous language contained in Measure Y was still valid as detailed below:

At the time of approval of a tentative map for a single family residential subdivision of five or more parcels that worsens (defined as a project that triggers Policy TC-Xe [A] or [B] or [C]) traffic on the County road system, the County shall do one of the following:

(1) condition the project to construct all road improvements necessary to maintain or attain Level of Service standards detailed in this Transportation and Circulation Element based on existing traffic plus traffic generated from the development plus forecasted traffic growth at 10-years from project submittal; or

(2) ensure the commencement of construction of the necessary road improvements are included in the County's 10-year CIP.

For all other discretionary projects that worsen (defined as a project that triggers Policy TC-Xe [A] or [B] or [C] traffic on the County road system, the County shall do one of the following:

(1) condition the project to construct all road improvements necessary to maintain or attain Level of Service standards as detailed in this Transportation and Circulation Element; or
(2) ensure the construction of the necessary road improvements is included in the County's 20-year CIP.

Existing Traffic Volumes / Levels of Service

Traffic Volume Counts. New traffic counts were made for this study on June 12, 2019. Intersection turning movement counts were made at study intersections during the period from 4:00 p.m. to 6:00 p.m. The highest hourly traffic volume period within the two-hour window was identified as the peak hour and used for this analysis.

This analysis was limited to the weekday p.m. peak hour based on Caltrans and El Dorado County consideration of SR 49 traffic volumes throughout the day, as well as the relative difference between project's a.m. and p.m. peak hour trip generation. Available data indicates

that the background a.m. peak hour volume is less than that in the p.m. peak hour. As noted in the subsequent assessment of project trip generation, Dollar General Stores typically generate considerably less traffic during the morning peak period.

Figure 3 illustrates the intersection turning movement count data for these intersections. This figure also notes the geometric layout of each intersection and the location of traffic controls. This data has been used to determine the operating Level of Service (LOS) at each intersection.

Level of Service at Intersections. Levels of Service were calculated for different intersection control types using the respective methods presented in the Highway Capacity Manual, 6th Edition (HCM 6 Ed). Intersection Levels of Service were calculated using SYNCHRO 10.0 software. For intersections controlled by side street stop signs, the reported Level of Service reflects the "worst case" movement, which is typically those motorists waiting to enter the main street.

As indicated in Table 3, each intersection delivers a peak hour Level of Service that satisfies minimum El Dorado County standards. Peak hour traffic signal warrants are satisfied at the SR 49 / SR 193 intersection.

TABLE 3
EXISTING INTERSECTION LEVELS OF SERVICE

Intersection	Control	PM Peak Hour		Signal* Warranted
		Average Delay (veh/sec)	LOS	
1. State Route 49 / Saint Florian Court				
Northbound left turn	EB Stop	8.7	A	
Eastbound approach		13.7	B	No
2. State Route 49 / Northside Drive				
Southbound left turn	WB Stop	7.9	A	No
Westbound approach		16.3	C	
3. State Route 49 / Timberline Commercial Access				
Northbound left turn	EB Stop	9.0	A	No
Eastbound approach		14.2	B	
4. State Route 49 / State Route 193	AWS	17.7	C	Yes
5. USPS Driveway / Northside Drive				
Southbound approach	SB Stop	8.5	A	No
Eastbound approach		7.1	A	
* CA MUTCD Peak Hour Signal Warrant, Figure 4C-3.				
AWS is All-Way Stop Control				

95th Percentile Queues. Table 4 identifies the 95th percentile queues occurring during the p.m. peak hour at the SR 49 / SR 193 intersection. These values are a byproduct of HCM LOS analysis. As indicated, all estimated queues can be accommodated within the available storage, and no improvements are currently needed.

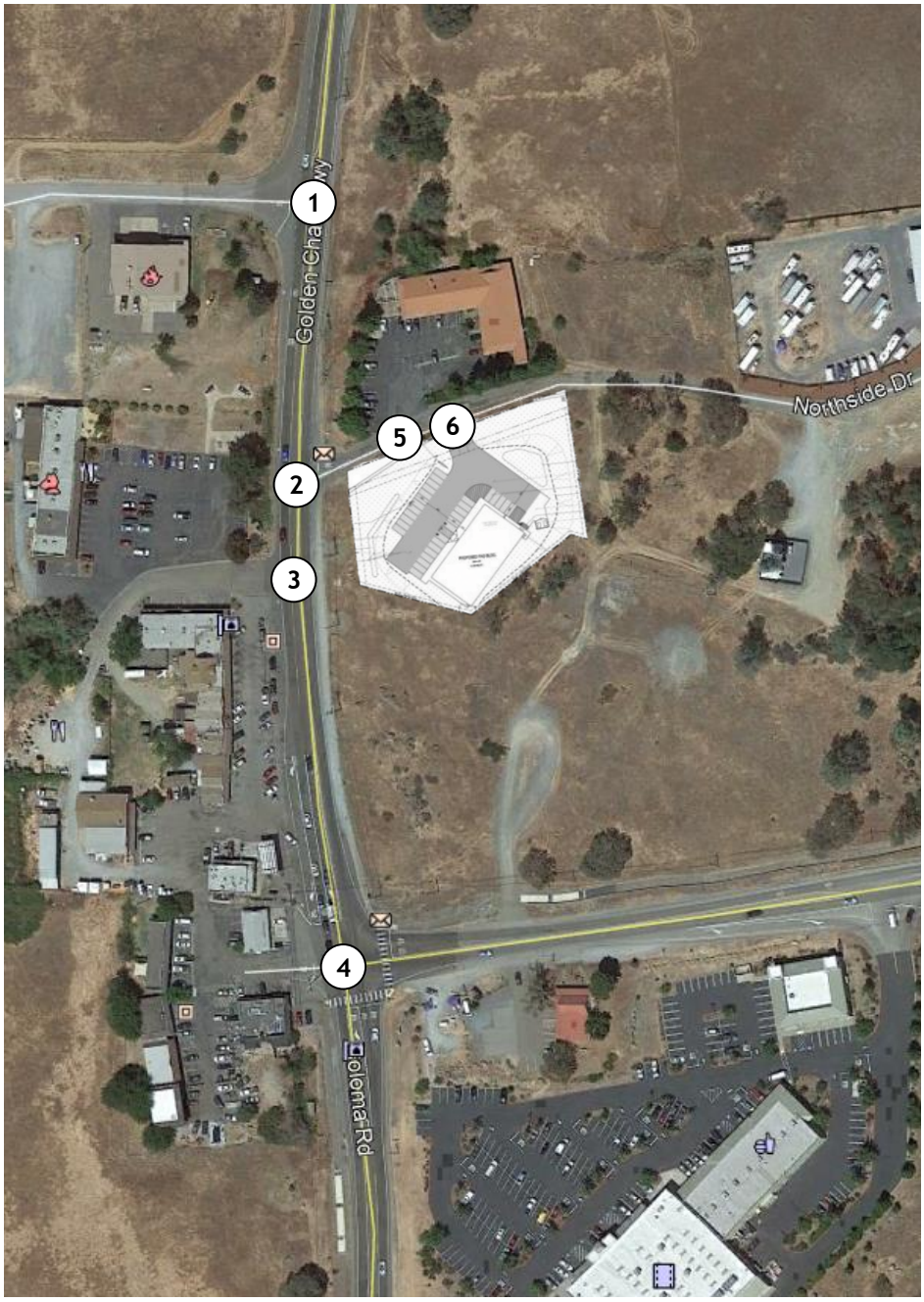
TABLE 4
EXISTING INTERSECTION PEAK HOUR QUEUES

Intersection	Lane	Storage (feet)	PM Peak Hour		Storage Adequate?
			Volume (vph)	95th % Queue (feet)	
4. State Route 49 / SR 193	SB left	200[1]	374	170	Yes
	NB left	150[1]	15	<25	Yes
	WB approach	unlimited	200	40	Yes
[1]lane continues as TWLT lane					

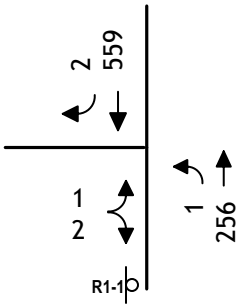
Roadway Segment Level of Service. Table 5 identifies the current operating Level of Service on the roadways in the vicinity of the project. As shown, the roadway segments in this area operate at LOS D, with the exception of southbound SR 49 north of SR 193 which operates at LOS E.

TABLE 5
EXISTING ROADWAY SEGMENT LEVELS OF SERVICE

Road	Location	Direction	PM Peak Hour			
			Volume (vph)	ATS (mph)	PTSF (%)	Level of Service
SR 49	North of SR 193	Northbound	257	40.7	53.9	D
		Southbound	561	39.5	77.4	E
	South of SR 193	Northbound	213	42.1	58.3	D
		Southbound	256	41.8	65.8	D
SR 193	East of SR 49	Eastbound	467	40.3	72.3	D
		Westbound	200	41.6	47.0	D

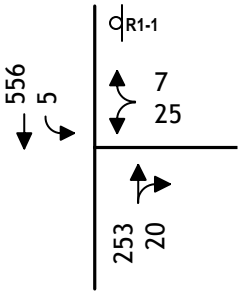


1



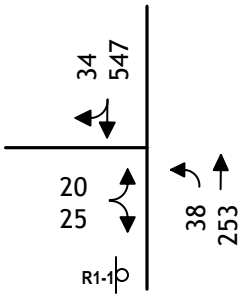
SR 49/ St Florian Ct

2



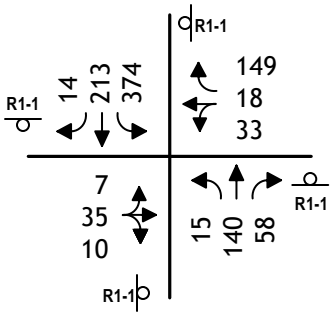
SR 49/ Northside Dr

3



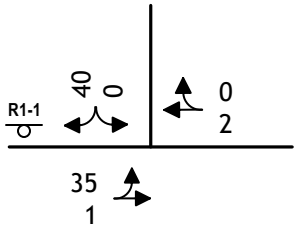
SR 49/ Commercial Driveway

4



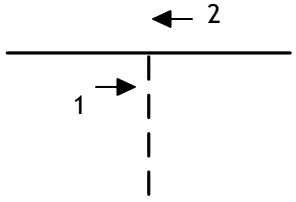
SR 49/ SR 193

5



USPS Access/ Northside Dr

6



Project Access/ Northside Dr

EXISTING TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

9470-02 RA 3/9/2020

figure 3

Collision History

Traffic collision information was obtained for locations on SR 49 for the period of January 1, 2016 to December 31, 2018. During that time period a total of one collision was reported for the segment from 300 feet south of SR 193 to 300 feet north of St Florian Court. One rear-end collision occurred 65 feet south of SR 193. The statewide average collision rate for rural three-lane roads (i.e., with TWLT lane) is 0.94 per Million Vehicle Miles (MVM). Over three years this ¼ mile long segment experienced a rate of 0.42 per MVM.

Alternative Transportation Modes

Pedestrian Facilities. There are currently no sidewalks in the area surrounding the proposed project.

Bicycle Facilities. The *El Dorado County General Plan (2018)* outlines the location and nature of existing bicycle facilities in El Dorado County. Bicycle facilities are categorized within three classifications:

Class I Bikeway: trails or paths that are separated from automobile traffic,
Class II Bikeway: bicycle lanes that are on street but delineated by striping, and
Class III Bikeway: bicycle routes where bicycles and automobiles share the road.

There are currently separated bicycle paths on the north side of SR 193 that extends for .83 miles from SR 49.

Transit Facilities. The El Dorado County Transit Authority (EDCTA) and Lake Tahoe Transit provide transit service in El Dorado County. The El Dorado County Transit Authority serves the residents of western El Dorado County, providing scheduled fixed-route service, daily commute service to Sacramento, dial-a-ride service in Placerville and outlying communities, and chartered social service routes. Life-line service is also provided to the elderly, the disabled, and Sacramento commuters. For EDCTA's fixed-route service, seven routes are local (within El Dorado County), and 12 are commuter routes to Sacramento County. In fiscal year 2000/2001, EDCTA served nearly 295,000 riders. The commuter service was particularly well used with an average weekday ridership of approximately 500. There are currently no bus routes that run through the surrounding area of the proposed project.

Regulatory Setting

El Dorado County General Plan. The El Dorado County General Plan Circulation Element sets forth future plans for the transportation system in the County.

State Route 49 TCR. Caltrans SR 49 (2017) identifies the long-range plan for this facility. SR 49 in this area will remain a 2-lane conventional highway with concept Level of Service D.

State Route 193 TCR. Caltrans SR 193 (2017) identifies the long-range plan for this facility. SR 193 in this area will remain a 2-lane conventional highway with concept Level of Service D.

PROJECT CHARACTERISTICS

The relative impacts of developing the Dollar General Store and the adequacy of site access is dependent on the physical characteristics of the adjoining street system, as well as the amount of traffic generated by the proposed project. The amount of additional traffic on a particular section of the street network is dependent upon two factors:

I. Trip Generation, the number of new trips generated by the project, and
II. Trip Distribution and Assignment, the specific routes that the new traffic takes.

Trip Generation

Trip Generation Rates. This analysis considered trip generation rates derived from several sources. The Institute of Transportation Engineers (ITE) publication *"Trip Generation, 10th Edition"* provides information on the characteristics of various retail uses. The use most similar to Dollar General Store is "Variety Store" (Code 814). The land use description notes that a Variety Store is a retail store providing health care & beauty aids, cleaning supplies, snack food, household items and some apparel. This is not a "dollar store" where everything is priced at one dollar, but rather is a small neighborhood store offering value and convenience. The stores studied were free-standing and catered to the local neighborhood. The 15 sites studied had building floor areas that ranged from roughly 8,000 to 17,000 square feet. Table 6 identifies the trip generation rates reported by ITE.

TABLE 6
TRIP GENERATION RATES

Land Use / Source	Unit	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Variety Store (814)	ksf	63.47	57%	43%	3.18	52%	48%	6.82
Dollar General Store	9.1 ksf	578	16	13	29	32	30	62
Pass-by Trips	34%	<196>	<5>	<5>	<10>	<10>	<10>	<20>
Net New Trips		382	11	8	19	22	20	42
Source: ITE Trip Generation, 10th Edition								

Trip Generation Forecasts. Table 6 also displays the p.m. peak hour trip generation forecasts for the 9.1 ksf Dollar General Store. The project would generate 62 p.m. peak hour trips at its driveway. A portion of the traffic drawn to these stores would be drawn from the stream of traffic already passing the site. The ITE *Trip Generation Handbook, 3rd Edition* notes that 34% of the weekday trips are "pass-by".

As noted in Table 6, the project is expected to generate 42 "new" trips during the p.m. peak hour.

The volume of traffic generated by variety stores is highest at midday and during the evening commute period. On a daily basis, after discount for "pass-by trips", the proposed project may generate 382 new daily trips (½ inbound and ½ outbound).

Truck Trips. The proposed project will receive regular deliveries from the Dollar General Stores regional distribution center serving this area of California. Project proponents anticipate that 1-2 full size trucks will visit the store each week, although smaller single unit trucks may visit each day. At typical Dollar General Stores some of the full-size trucks are expected to be STAA trucks (53') permitted on California highways under the Surface Transportation Authorization Act. However, when the regional routes providing access to individual stores are not designated for STAA, alternative vehicles are used. This is the case on this portion of SR 49 which is not an STAA terminal route.

The anticipated truck delivery route to and from this site will be to and from US 50 to the south, as noted in the illustration included in the appendix to this report.

Site truck circulation has been reviewed. The project will result in trucks turning into the site and turning first right into the parking aisle that runs parallel to Northside Drive. From that point the truck will back into the aisle towards the store's rear door. After completing the delivery, trucks will proceed to Northside Drive. This is a common Dollar General Store configuration, and the parking layout is wide enough to accommodate these movements.

Vehicle Trip Distribution / Assignment

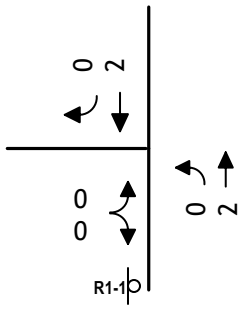
The distribution of project traffic was determined based on knowledge of the demographic distribution of residences and competing stores in this area of El Dorado County and on market characteristics of Dollar General Stores. As noted in Table 7, assuming a primary trade area that extends 1-2 miles from the site, the new trips attracted to the site will arrive primarily from the south along SR 49 and east along SR 193, with lesser shares arriving from the north and from the businesses that already exist along SR 49. Pass-by trips will be drawn from passing traffic on SR 49 in general proportion to the current peak hour volumes from each direction.

TABLE 7
DIRECTIONAL TRIP DISTRIBUTION (NEW TRIPS)

Direction	Route	Percentage of New Trips
North	SR 49 north of Northside Drive	10%
East	SR 193 east of SR 49	40%
South	SR 49 south of Northside Drive	40%
West	Local businesses	10%
Total		100%

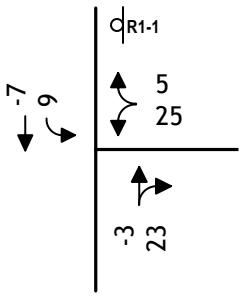
Using the trip generation and distribution assumptions described above, the trips generated by the proposed project were assigned to the study area street system. Figure 4 presents peak hour volumes accompanying development of the project.

1



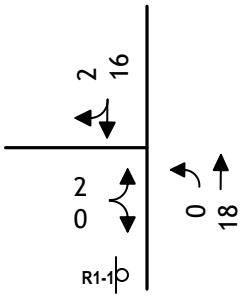
SR 49/ St Florian Ct

2

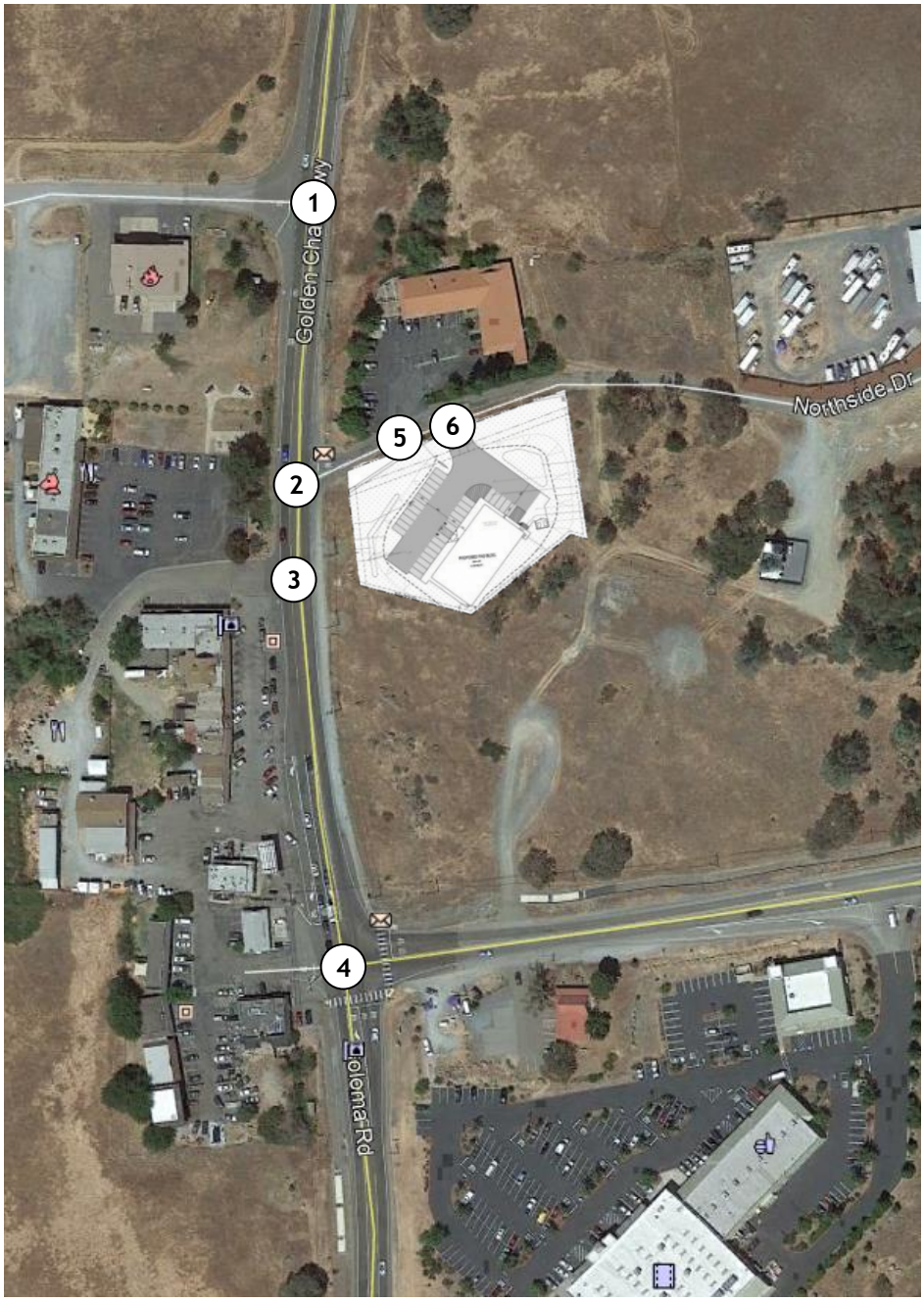


SR 49/ Northside Dr

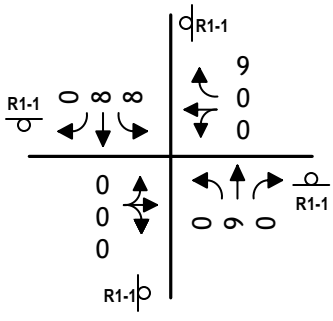
3



SR 49/ Commercial Driveway

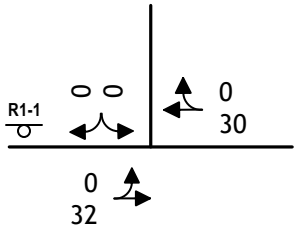


4



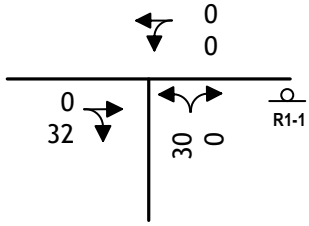
SR 49/ SR 193

5



UPS Access/ Northside Dr

6



Project Access/ Northside Dr

PROJECT ONLY TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

9470-02 RA 3/9/2020

figure 4

PROJECT TRAFFIC IMPACTS

Existing Plus Project Traffic Conditions and Levels of Service

Figure 5 superimposes project trips onto the current background traffic volumes to create the "Existing plus Project" condition. Subsequent tables compare the "Existing" and "Existing plus Project" Levels of Service.

Project Traffic Impacts to Level of Service at Intersections. As shown in Table 8, because the amount of traffic projected to be generated by the project is relatively low, the addition of project traffic would not appreciably increase the length of delays already occurring at study intersections, and the project does not result in any change to the overall Level of Service at each location. Projected increases in delay are calculated to be less than one (1) second. Levels of Service will remain within adopted minimum standards of El Dorado County at each location.

Traffic Signal Warrants. The volume of traffic occurring at each intersection with development of the project was again compared to the CA MUTCD peak hour signal warrant thresholds. Traffic signals continue to be warranted at SR 49 / SR 193 with the project. The SR 193 TCR suggests a roundabout will someday be installed at this location, but no funding is identified. Currently, improvements to this intersection are not included in El Dorado County's regional traffic impact fee program.

95th Percentile Queues. Table 9 identifies the 95th percentile queues occurring during the p.m. peak hour at the SR 49 / SR 193 intersection if the project is developed. As indicated, the queue in the southbound left turn lane may increase by about 10 feet as a result of the project. This queue will continue to be accommodated within the limits of the painted left turn lane. No improvements are needed.

Roadway Segments. As noted in Table 10, the project will add traffic to the state highway segments in this area. However, the volume of traffic is too small to have an appreciable effect on the performance of roadway segments. With the exception of SR 49 north of Cool, LOS D will remain in all areas. The project's contribution to the segment of SR 49 that operates at LOS E is less than the increments used by El Dorado County to judge the significance of the identified traffic increase (i.e., less than 10 trips per hour).

TABLE 8
EXISTING PLUS PROJECT INTERSECTION LEVELS OF SERVICE

Intersection	Control	PM Peak Hour				Signal Warrant
		Existing No Project		Existing Plus Project		
		LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	
1. State Route 49 / Saint Florian Court	EB Stop					
Northbound left turn		A	8.7	A	8.7	
Eastbound approach		B	13.7	B	13.8	No
2. State Route 49 / Northside Drive	WB Stop					
Southbound left turn		A	7.9	A	7.9	
Westbound approach		C	16.3	C	18.5	No
3. State Route 49 / Timberline Commercial Access	EB Stop					
Northbound left turn		A	9.0	A	9.0	
Eastbound approach		B	14.2	B	14.6	No
4. State Route 49 / State Route 193	AWS	C	17.7	C	18.8	Yes
5. USPS Driveway / Northside Drive	SB Stop					
Southbound approach		A	8.5	A	8.7	
Eastbound approach		A	7.1	A	7.4	No
6. Project Access / Northside Drive	NB Stop					
Northbound approach		--	--	A	8.7	No

TABLE 9
EXISTING PLUS PROJECT INTERSECTION PEAK HOUR QUEUES

Intersection	Lane	Storage (feet)	PM Peak Hour					
			No Project		Plus Project			
			Volume (vph)	95th % Queue (feet)	Volume (vph)		95th % Queue (feet)	Storage Adequate?
					Project Only	Total		
State Route 49 / SR 193	SB left	200[1]	374	170	8	382	180	No
	NB left	150[1]	25	<25	0	15	<25	Yes
	WB approach	unlimited	200	40	9	209	45	Yes
[1]lane continues as TWLT lane								

TABLE 10
EXISTING PLUS PROJECT ROADWAY SEGMENT LEVELS OF SERVICE

Road	Location	Direction	PM Peak Hour							
			Existing				Plus Project			
			Volume (vph)	ATS (mph)	PTSF (%)	LOS	Volume added (vph)	ATS (mph)	PTSF (%)	LOS
SR 49	North of SR 193 beyond Northside Dr	Northbound	257	40.7	53.9	D	2	40.7	53.9	D
		Southbound	561	39.5	77.4	E	2	39.5	77.5	E
	South of SR 193	Northbound	213	42.1	58.3	D	9	42.0	58.5	D
		Southbound	256	41.8	65.8	D	8	41.8	65.8	D
SR 193	East of SR 49	Eastbound	467	40.3	72.3	D	8	40.3	73.9	D
		Westbound	200	41.6	47.0	D	9	41.6	48.8	D

Project Impacts to Alternative Transportation Modes

Development of the proposed Dollar General Store may incrementally contribute to the demand for facilities to serve pedestrians, cyclists and transit riders in this area of El Dorado County, but this demand is expected to be relatively minor.

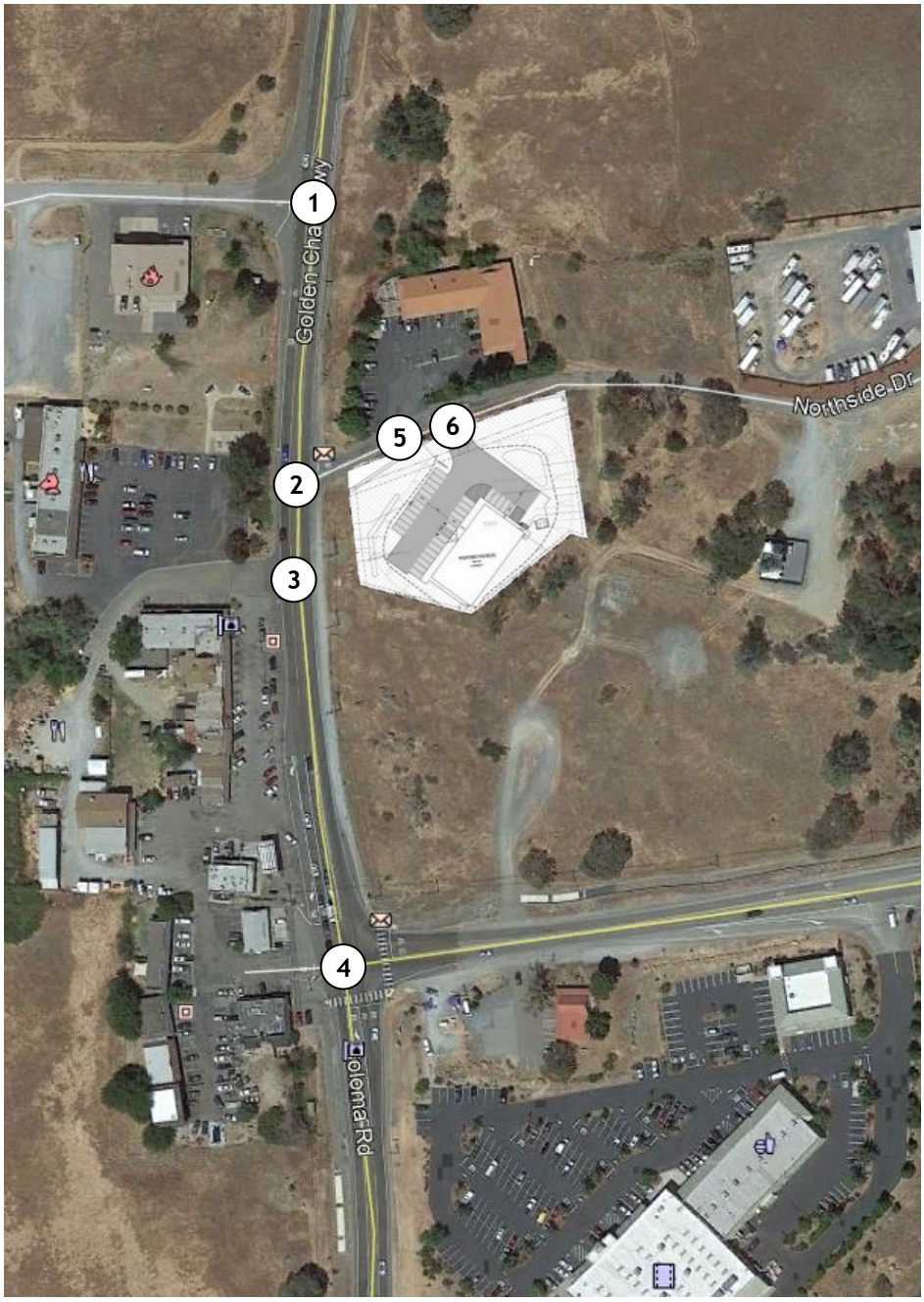
Pedestrian Impacts. It is unlikely employees or customers of this project will elect to walk in appreciable numbers to and from the site, as there is little residential or commercial development near the site.

Bicycle Impacts. While the use of bicycles may be an option for employees or customers to the site, such traffic will likely be low. The number of cyclists associated with this project is not likely to create any appreciable safety impacts on SR 49 where the paved shoulder is already available to provide access to the project.

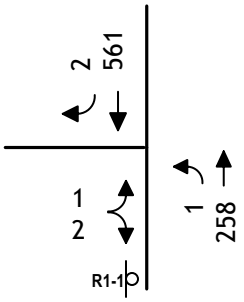
Transit Impacts. Project employees or customers are unlikely to use bus transit service, as no fixed routes pass through the site area.

Site Access

Throat Depth. Access to the site is proposed via a driveway on the south side of Northside Drive. The driveway is 40 feet wide. The main parking aisle is separated from Northside Drive by about 40 feet of throat. Two waiting vehicles can queue prior to blocking access to those parking spaces. This layout is expected to operate satisfactorily given the low traffic volumes projected to be generated by the site. The Level of Service calculations indicate that the 95th percentile queue at the exit will be 1 vehicle or less during peak periods, which can be accommodated in the 40 feet.

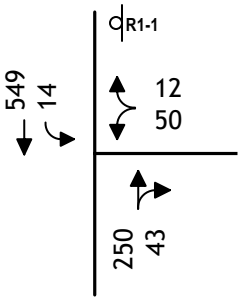


1



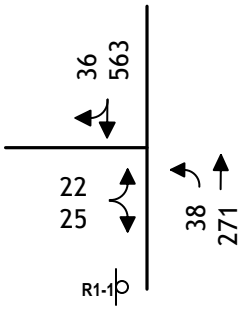
SR 49/ St Florian Ct

2



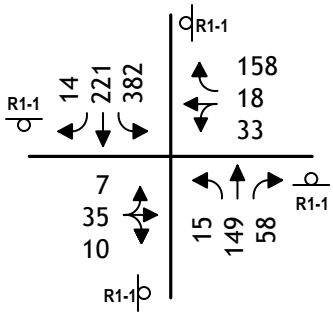
SR 49/ Northside Dr

3



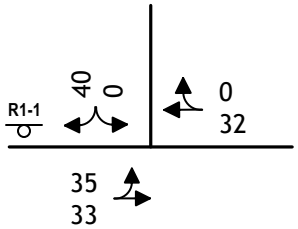
SR 49/ Commercial Driveway

4



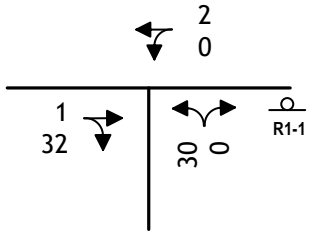
SR 49/ SR 193

5



USPS Access/ Northside Dr

6



Project Access/ Northside Dr

EXISTING PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

9470-02 RA 3/9/2020

figure 5

CUMULATIVE IMPACTS

The impacts of the Dollar General Store project have also been considered within the context of future traffic conditions in this area of El Dorado County. Long term traffic conditions have been forecast and evaluated based on forecasts from the El Dorado County regional demand forecasting model.

Year 2040 Long Term Cumulative Conditions

Approach to Developing Traffic Volume Forecasts. In El Dorado County long term future traffic conditions are identified by the regional travel demand forecasting model maintained by El Dorado County. This tool has been employed to develop traffic volume forecasts for the Regional Transportation Plan, and for EIR's prepared for projects throughout the County. The most current version of the model has been employed for this cumulative analysis.

Methods. The approach taken to prepare background traffic volume forecasts for this analysis makes use of data from the current version of the El Dorado County regional traffic model. The incremental change in peak hour traffic was determined on a segment by segment basis through comparison of Year 2015 baseline and Year 2040 forecasts (refer to Appendix for 2015 and 2040 model forecasts). These forecasts indicate that relatively little growth will occur on study area streets.

Traffic Volume Forecasts. Figure 6 identifies "No Project" background Year 2040 traffic volumes, while Figure 7 identifies Year 2040 volumes with Dollar General Store.

No Project Conditions. The following conditions are expected if the Dollar General project does not proceed.

***Level of Service at Intersections / Traffic Signal Warrants*.** Peak hour intersection Levels of Service were recalculated assuming no change to current intersection geometries. As shown in Table 11, without the project all study intersections will continue to operate with Levels of Service that satisfy minimum LOS D standard. Peak hour traffic signal warrants (warrant 3) would be satisfied at the SR 49/SR 193 intersection.

95th Percentile Queues. Table 12 identifies the 95th percentile queues occurring at the SR 49 / SR 193 intersection under cumulative conditions if no improvements are made. As indicated, without the project the queue in the southbound SR 49 left turn lane may reach 300 feet. This distance exceeds the current left turn lane length, and the queue would extend about 100 feet into the adjoining TWLT lane. The back of the queue would be about 50 feet from the beginning of the driveway serving the property on the west side of SR 49. Caltrans may elect to modify the left turn lane striping in the future.

Roadway Segment Level of Service. As noted in Table 13, while background traffic volumes will increase in the future the Level of Service based on HCM techniques does not change. LOS E remains on SR 49 north of SR 193, and LOS D occurs elsewhere.

Plus Project Conditions. Adding trips from the Dollar General has the following effects.

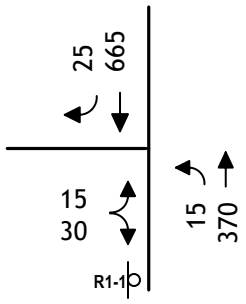
Level of Service at Intersections / Traffic Signal Warrants. As noted in Table 11, the addition of project trips does not result in any intersection operating with Level of Service in excess of the LOS D minimum. Thus, the project's impacts are not significant, and mitigation is not required based on Level of Service.

95th Percentile Queues. The addition of project trips would increase this queue to 320 feet. This queue would be closer to but would not reach to the adjoining driveway.

Roadway Segment Levels of Service. The addition of project trips does not change the Level of Service on any roadway segment, and the project's contribution to SR 49 north of Cool remains less than significant based on County guidelines.

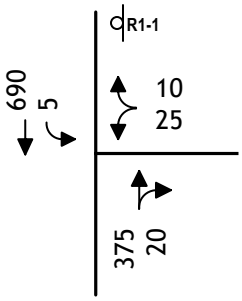
Mitigations. The proposed project would contribute its fair share to the cost of regional circulation improvements by paying adopted fees and making frontage improvements, but no additional mitigation related to roadway capacity and Level of Service is required.

1



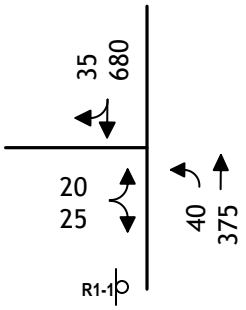
SR 49/ St Florian Ct

2

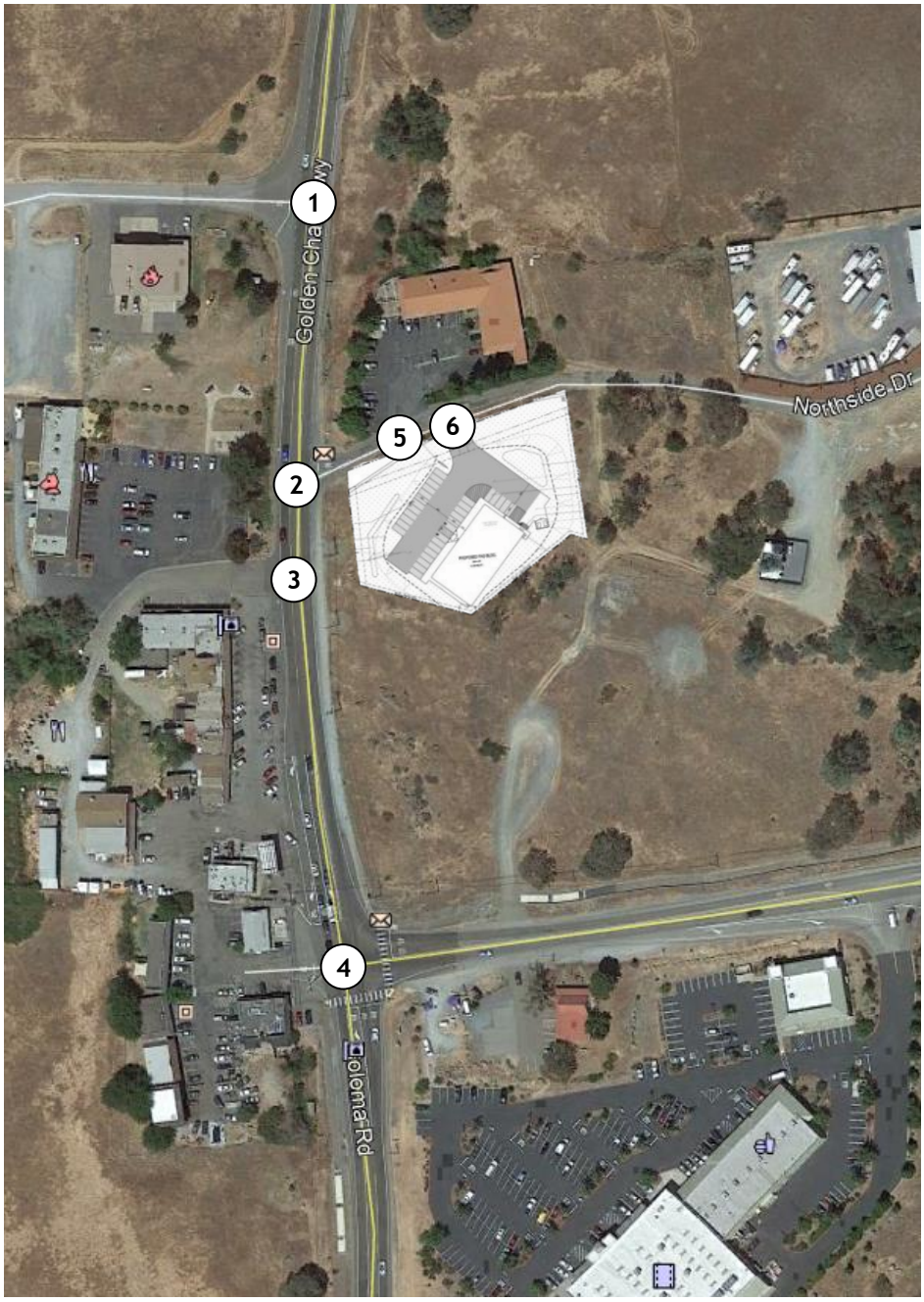


SR 49/ Northside Dr

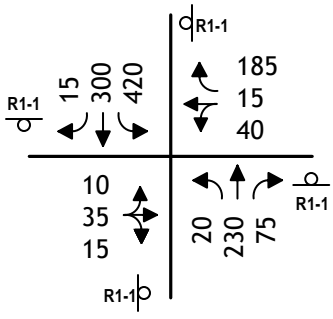
3



SR 49/ Commercial Driveway

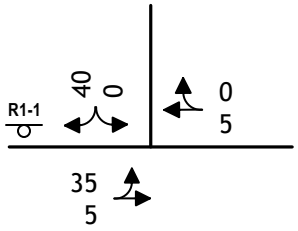


4



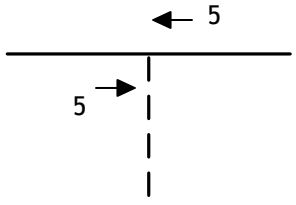
SR 49/ SR 193

5



USPS Access/ Northside Dr

6



Project Access/ Northside Dr

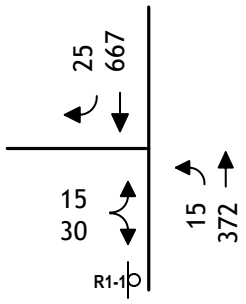
CUMULATIVE TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

9470-02 RA 3/9/2020

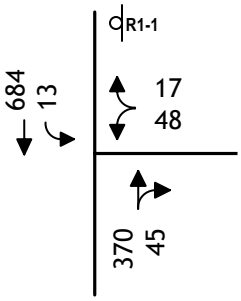
figure 6

1



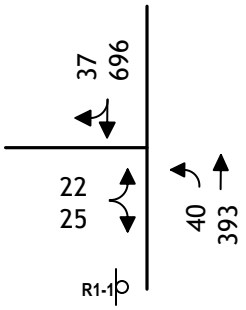
SR 49/ St Florian Ct

2

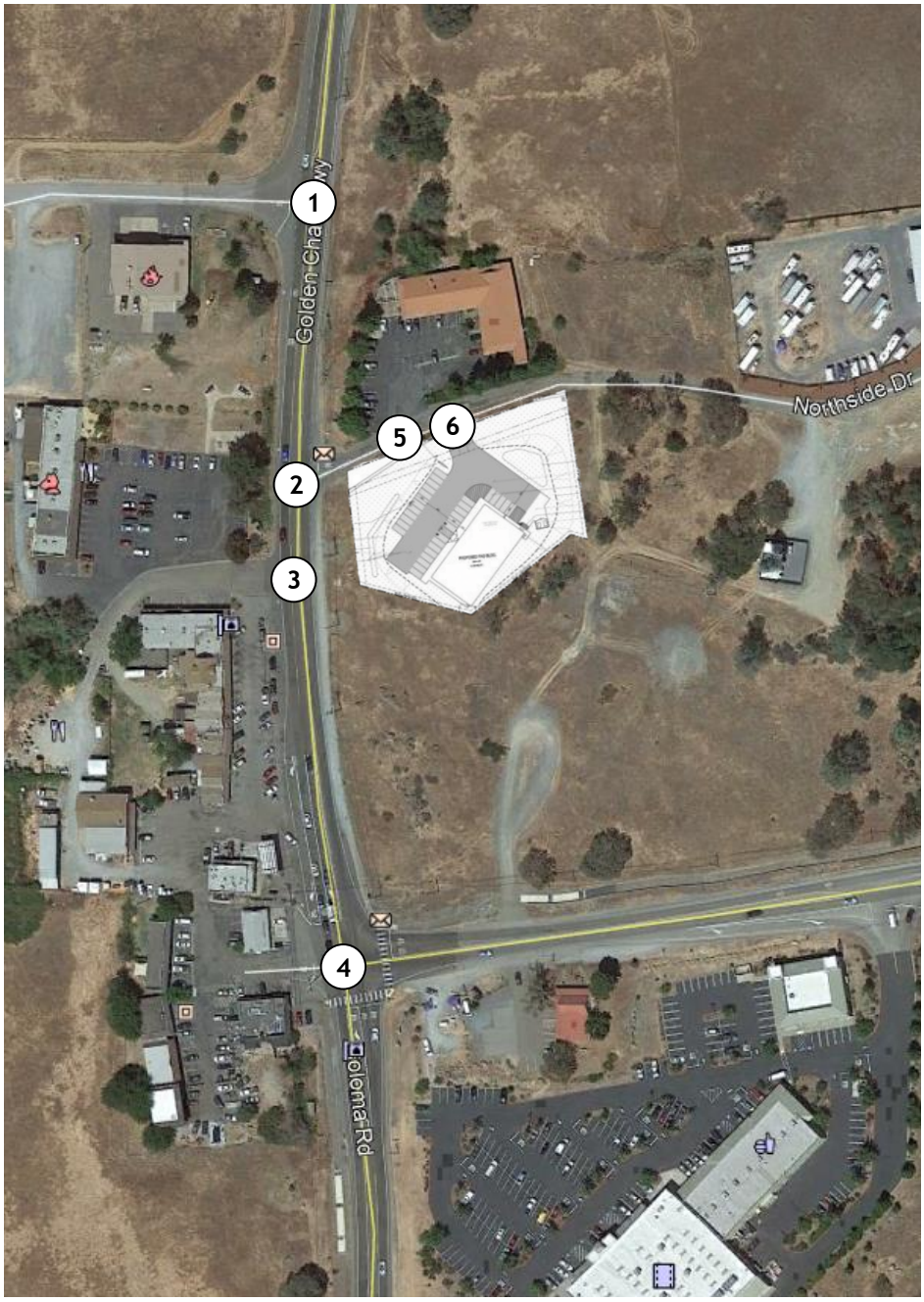


SR 49/ Northside Dr

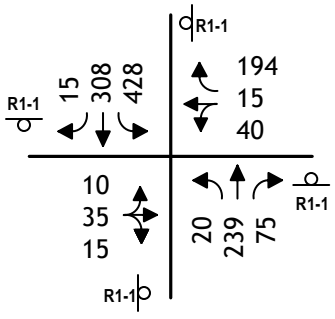
3



SR 49/ Commercial Driveway

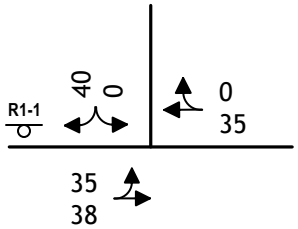


4



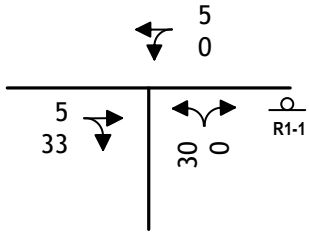
SR 49/ SR 193

5



USPS Access/ Northside Dr

6



Project Access/ Northside Dr

CUMULATIVE PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

9470-02 RA 3/9/2020

figure 7

TABLE 11
YEAR 2040 PLUS PROJECT INTERSECTION LEVELS OF SERVICE

Intersection	Control	PM Peak Hour				Signal Warrant
		Cumulative No Project		Cumulative Plus Project		
		LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	
1. State Route 49 / Saint Florian Court	EB Stop					
Northbound left turn		A	9.3	A	9.3	
Eastbound approach		C	18.3	C	18.4	No
2. State Route 49 / Northside Drive	WB Stop					
Southbound left turn		A	8.2	A	8.3	
Westbound approach		C	21.2	D	25.4	No
3. State Route 49 / Timberline Commercial Access	EB Stop					
Northbound left turn		A	9.5	A	9.6	
Eastbound approach		C	16.6	C	17.2	No
4. State Route 49 / State Route 193	AWS	D	30.6	D	33.7	Yes
5. USPS Driveway / Northside Drive	SB Stop					
Southbound approach		A	8.5	A	8.7	
Eastbound approach		A	7.3	A	7.4	No
6. Project Access / Northside Drive	NB Stop					
Northbound approach		--	--	A	8.8	No

TABLE 12
YEAR 2040 PLUS PROJECT INTERSECTION PEAK HOUR QUEUES

Intersection	Lane	Storage (feet)	PM Peak Hour					
			No Project		Plus Project			
			Volume (vph)	95th % Queue (feet)	Volume (vph)		95th % Queue (feet)	Storage Adequate?
					Project Only	Total		
State Route 49 / SR 193	SB left	200[1]	420	300	8	428	320	No
	NB left	150[1]	20	<25	0	20	<25	Yes
	WB approach	unlimited	240	65	9	249	70	Yes
[1]lane continues as TWLT lane								

TABLE 13
YEAR 2040 PLUS PROJECT ROADWAY SEGMENT LEVELS OF SERVICE

Road	Location	Direction	PM Peak Hour							
			No Project				Plus Project			
			Volume (vph)	ATS (mph)	PTSF (%)	LOS	Volume added (vph)	ATS (mph)	PTSF (%)	LOS
SR 49	North of SR 193 beyond Northside Dr	Northbound	425	38.6	65.9	E	2	38.6	66.1	E
		Southbound	735	37.7	84.4	E	2	37.7	84.4	E
	South of SR 193	Northbound	325	41.3	64.2	D	9	41.3	65.5	D
		Southbound	330	41.3	65.3	D	8	41.2	66.5	D
SR 193	East of SR 49	Eastbound	530	40.1	73.1	D	8	40.1	76.2	D
		Westbound	240	41.0	51.7	D	9	40.9	52.9	D

SUMMARY AND CONCLUSIONS

This report documents **KD Anderson & Associates'** analysis of the traffic impacts associated with developing a Dollar General Store on Northside Drive in El Dorado County, California. The analysis addresses both current and future background conditions at key intersections in the vicinity of the site. To assess traffic impacts, the characteristics of the proposed project have been determined, including estimated trip generation and the directional distribution / assignment of project generated traffic.

The proposed project consists of a 9.1 ksf Dollar General Store located on a 1.68 acre site on the south side of Northside Drive about 190 feet east of SR 49. The project will include development of 31 parking spaces per El Dorado County Zoning Ordinance requirements. Access to the site will be provided via a new driveway to Northside Drive. The Northside Drive site frontage is currently unimproved, with no frontage improvements beyond the driveway improvements are planned with the development of the project.

Trip Generation. The project is expected to generate a total of 578 daily trips, with roughly 11% or 62 trips during the p.m. peak hour. After discounting for pass-by trips already occurring on SR 49 adjacent to the site, the project is projected to generate 42 new trips in the weekday p.m. peak hours.

Existing Plus Project Traffic Conditions. Development of the project alone does not result in a significant impact to traffic based on the criteria adopted by El Dorado County. Satisfactory operations are currently experienced at the study intersections and no changes to existing Levels of Service are projected with development of the site. Traffic signal warrants are met with and without the project at the SR 49/ SR 193 intersection. Current peak period queues can be accommodated within existing turn lanes. The current roadway segment Levels of Service on state highways near the project which range from LOS D on SR 193 and SR 49 south of Cool to LOS E on SR 49 north of Cool will not change as a result of the project, and the increment of traffic added to SR 49 north of Cool falls below the County's significance criteria (i.e., <10 vph).

The project access will be improved to El Dorado County encroachment permit standards.

Long Term Cumulative (Year 2040) Traffic Impacts. The study intersections are projected to operate without significant delays in the future with the existing traffic controls, and the County's LOS D minimum standard for intersections will be met with or without development of the proposed project. The project does not change the roadway segment LOS projected on state highways, and while SR 49 north of Cool will continue to operate at LOS E with and without the project, the increment of traffic added by the Dollar Generals falls below the County's significance criteria. Traffic signal warrants would continue to be met at the SR 49/SR 193 intersection. With and without the project the queue of peak period traffic in the southbound left turn lane at the SR 49 / SR 193 intersection will extend beyond the striped turn pocket. The queue will extend into the adjoining TWLT lane but will not reach the next driveway on the west side of SR 49.

Typically, El Dorado County monitors the operation of intersections, and adds improvements such as traffic signals to the fee priority list as appropriate. The proposed project would contribute its fair share to the cost of regional circulation improvements, including any SR 49/SR193 improvements by paying adopted fees, and no additional mitigation related to roadway capacity and Level of Service is required.

APPENDIX

(Traffic Counts, LOS Calculations)

Prepared by National Data & Surveying Services

SR 49 & St Florian Ct

Peak Hour Turning Movement Count

ID: 19-07230-001
City: Cool

Day: Wednesday
Date: 06/12/2019

SR 49 — SOUTHBOUND

PEAK HOURS								COUNT PERIODS
NONE	AM	0	0	0	0	0	AM	NONE
NONE	NOON	0	0	0	0	0	NOON	NONE
04:30 PM - 05:30 PM	PM	2	559	0	0	257	PM	04:00 PM - 06:00 PM

St Florian Ct — EASTBOUND

AM	NOON	PM	
0	0	3	⇦
0	0	0	↶ 0
0	0	1	↱ 0
0	0	0	→ 0
0	0	2	↷ 0
AM	NOON	PM	

WESTBOUND — St Florian Ct

PM	NOON	AM	
0	0	0	0 ↷
0	0	0	0 ←
0	0	0	0 ↶
0	0	0	0 ↷
0	0	0	⇨
PM	NOON	AM	

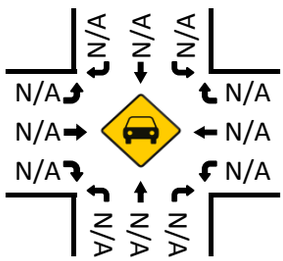
CONTROL: 1-Way Stop (EB)

	AM	NOON	PM
TEV	0	0	821
PHF			0.96

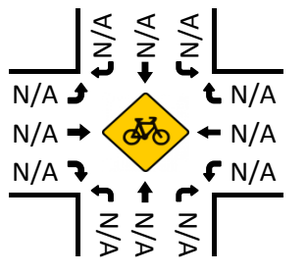
NORTHBOUND — SR 49

PM	561	0	1	256	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

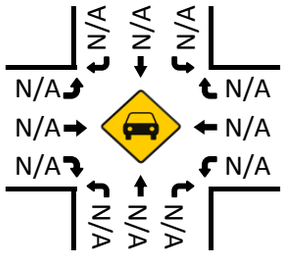
Total Vehicles (AM)



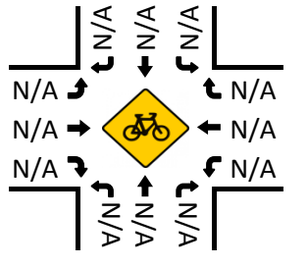
Bikes (AM)



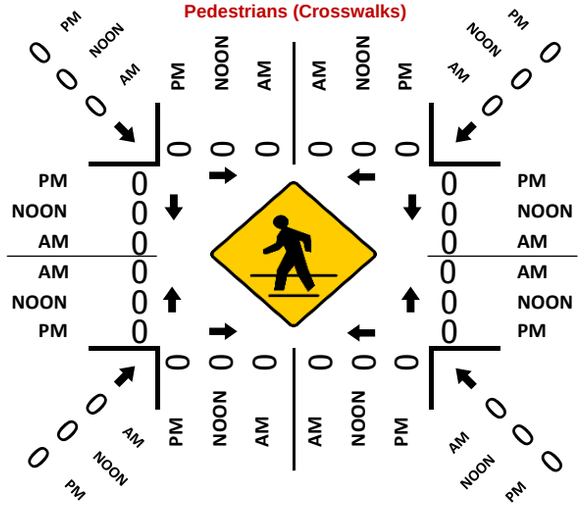
Total Vehicles (Noon)



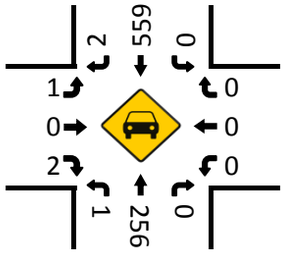
Bikes (NOON)



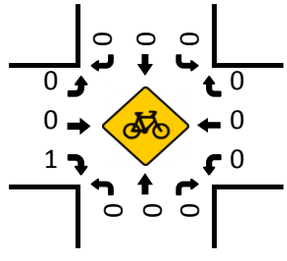
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & St Florian Ct
City: Cool
Control: 1-Way Stop (EB)

Project ID: 19-07230-001
Date: 6/12/2019

Total

NS/EW Streets:	SR 49				SR 49				St Florian Ct				St Florian Ct				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	45	0	0	0	106	0	0	0	0	1	0	0	0	0	0	152
4:15 PM	0	71	0	0	0	101	1	0	0	0	0	0	0	0	0	0	173
4:30 PM	0	69	0	0	0	144	0	0	0	0	1	0	0	0	0	0	214
4:45 PM	1	59	0	0	0	128	0	0	0	0	0	0	0	0	0	0	188
5:00 PM	0	65	0	0	0	139	1	0	1	0	1	0	0	0	0	0	207
5:15 PM	0	63	0	0	0	148	1	0	0	0	0	0	0	0	0	0	212
5:30 PM	0	50	0	0	0	128	0	0	0	0	0	0	0	0	0	0	178
5:45 PM	0	54	0	0	0	124	1	0	0	0	1	0	0	0	0	0	180
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	476	0	0	0	1018	4	0	1	0	4	0	0	0	0	0	1504
APPROACH %'s :	0.21%	99.79%	0.00%	0.00%	0.00%	99.61%	0.39%	0.00%	20.00%	0.00%	80.00%	0.00%					
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	1	256	0	0	0	559	2	0	1	0	2	0	0	0	0	0	821
PEAK HR FACTOR :	0.250	0.928	0.000	0.000	0.000	0.944	0.500	0.000	0.250	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.959
		0.931				0.941				0.375							

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & St Florian Ct
City: Cool
Control: 1-Way Stop (EB)

Project ID: 19-07230-001
Date: 6/12/2019

Bikes

NS/EW Streets:	SR 49				SR 49				St Florian Ct				St Florian Ct				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%					0.00%	0.00%	100.00%	0.00%					
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250
									0.250								

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & St Florian Ct
City: Cool

Project ID: 19-07230-001
Date: 6/12/2019

Pedestrians (Crosswalks)

NS/EW Streets:	SR 49		SR 49		St Florian Ct		St Florian Ct		
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0
APPROACH %'s :									
PEAK HR :	04:30 PM - 05:30 PM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

Prepared by National Data & Surveying Services

SR 49 & Northside Dr

Peak Hour Turning Movement Count

ID: 19-07230-002
City: Cool

Day: Wednesday
Date: 06/12/2019

PEAK HOURS

AM	NONE
NOON	NONE
PM	04:30 PM - 05:30 PM

COUNT PERIODS

AM	NONE
NOON	NONE
PM	04:00 PM - 06:00 PM

SR 49 — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	556	5	0	260	PM

EASTBOUND (Northside Dr)

AM	NOON	PM	
0	0	0	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
AM	NOON	PM	

WESTBOUND (Northside Dr)

PM	NOON	AM	
7	0	0	0
0	0	0	0
25	0	0	0
0	0	0	0
25	0	0	
PM	NOON	AM	

CONTROL

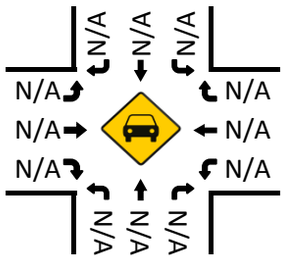
1-Way Stop (WB)

	AM	NOON	PM
TEV	0	0	866
PHF			0.94

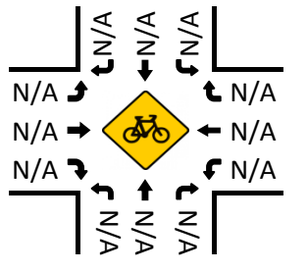
SR 49 — NORTHBOUND

PM	581	0	0	253	20	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

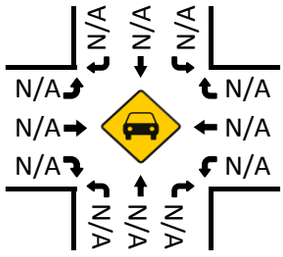
Total Vehicles (AM)



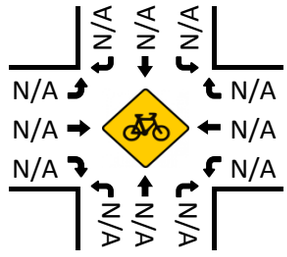
Bikes (AM)



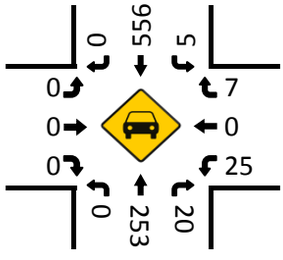
Total Vehicles (Noon)



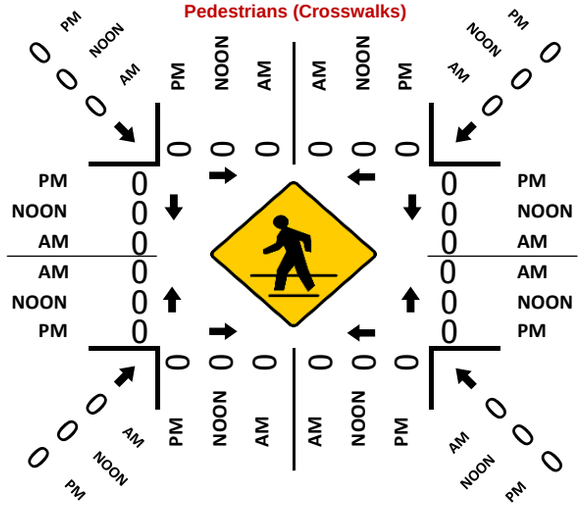
Bikes (NOON)



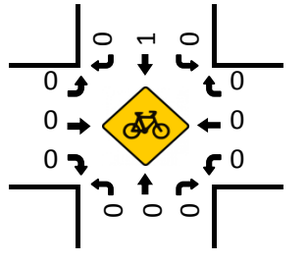
Total Vehicles (PM)



Pedestrians (Crosswalks)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & Northside Dr
City: Cool
Control: 1-Way Stop (WB)

Project ID: 19-07230-002
Date: 6/12/2019

Total

NS/EW Streets:	SR 49				SR 49				Northside Dr				Northside Dr				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	43	6	0	2	105	0	0	0	0	0	0	6	0	3	0	165
4:15 PM	0	66	10	0	3	99	0	0	0	0	0	0	10	0	2	0	190
4:30 PM	0	70	6	0	1	143	0	0	0	0	0	0	10	0	1	0	231
4:45 PM	0	57	6	0	2	125	0	0	0	0	0	0	8	0	2	0	200
5:00 PM	0	65	5	0	2	139	0	0	0	0	0	0	3	0	1	0	215
5:15 PM	0	61	3	0	0	149	0	0	0	0	0	0	4	0	3	0	220
5:30 PM	0	47	6	0	1	126	0	0	0	0	0	0	6	0	1	0	187
5:45 PM	0	55	1	0	0	125	0	0	0	0	0	0	2	0	0	0	183
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	464	43	0	11	1011	0	0	0	0	0	0	49	0	13	0	1591
APPROACH %'s :	0.00%	91.52%	8.48%	0.00%	1.08%	98.92%	0.00%	0.00%					79.03%	0.00%	20.97%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	253	20	0	5	556	0	0	0	0	0	0	25	0	7	0	866
PEAK HR FACTOR :	0.000	0.904	0.833	0.000	0.625	0.933	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.583	0.000	0.937
		0.898				0.941								0.727			

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & Northside Dr
City: Cool
Control: 1-Way Stop (WB)

Project ID: 19-07230-002
Date: 6/12/2019

Bikes

NS/EW Streets:	SR 49				SR 49				Northside Dr				Northside Dr				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%									
PEAK HR :	**04:30 PM - 05:30 PM**																TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
						0.250											

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & Northside Dr
City: Cool

Project ID: 19-07230-002
Date: 6/12/2019

Pedestrians (Crosswalks)

NS/EW Streets:	SR 49		SR 49		Northside Dr		Northside Dr		
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0
APPROACH %'s :									
PEAK HR :	04:30 PM - 05:30 PM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

9470-02

Prepared by National Data & Surveying Services

United States Postal Service Dwy Access & Northside Dr

Peak Hour Turning Movement Count

ID: 19-07230-003
City: Cool

Day: Wednesday
Date: 06/12/2019

PEAK HOURS		COUNT PERIODS
NONE		NONE
NONE		NONE
04:00 PM - 05:00 PM		04:00 PM - 06:00 PM

United States Postal Service Dwy Access

SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	40	0	0	0	35	PM

0 0 0 0

EASTBOUND — Northside Dr

AM	NOON	PM	
0	0	42	
0	0	0	0
0	0	35	0
0	0	1	0
0	0	0	0
AM	NOON	PM	

WESTBOUND — Northside Dr

PM	NOON	AM	
0	0	0	0
2	0	0	0
0	0	0	0
0	0	0	0
1	0	0	
PM	NOON	AM	

CONTROL

No Control

	AM	NOON	PM
TEV	0	0	78
PHF			0.78

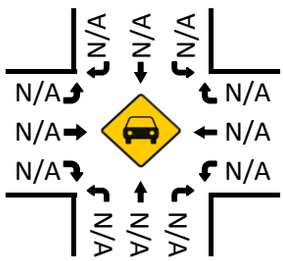
0 0 0 0

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

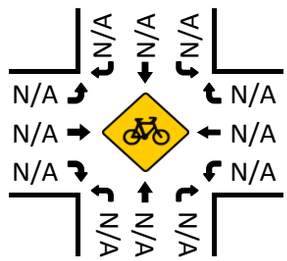
NORTHBOUND

ited States Postal Service Dwy Acce

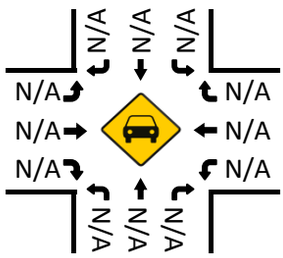
Total Vehicles (AM)



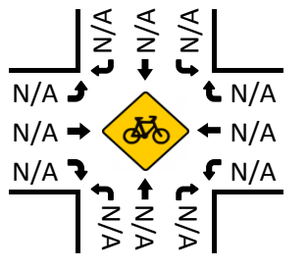
Bikes (AM)



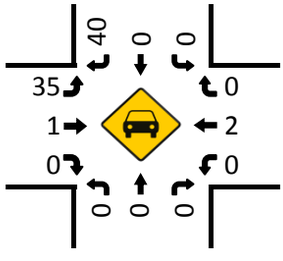
Total Vehicles (Noon)



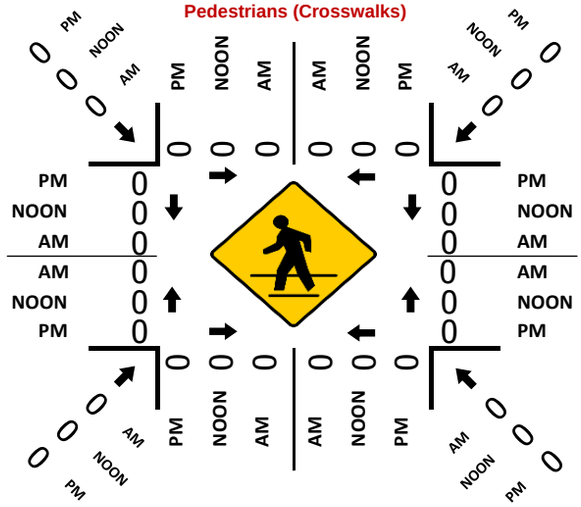
Bikes (NOON)



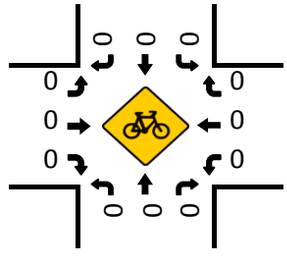
Total Vehicles (PM)



Pedestrians (Crosswalks)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: United States Postal Service Dwy Access & Northside Dr
City: Cool
Control: No Control

Project ID: 19-07230-003
Date: 6/12/2019

Total

NS/EW Streets:	United States Postal Service Dwy Access				United States Postal Service Dwy Access				Northside Dr				Northside Dr				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
4:00 PM	0	0	0	0	0	0	9	0	8	0	0	0	0	0	0	0	17
4:15 PM	0	0	0	0	0	0	10	0	12	1	0	0	0	2	0	0	25
4:30 PM	0	0	0	0	0	0	12	0	7	0	0	0	0	0	0	0	19
4:45 PM	0	0	0	0	0	0	9	0	8	0	0	0	0	0	0	0	17
5:00 PM	0	0	0	0	0	0	4	0	5	2	0	0	0	0	0	0	11
5:15 PM	0	0	0	0	0	0	5	0	3	0	0	0	0	2	0	0	10
5:30 PM	0	0	0	0	0	0	7	0	7	0	0	0	0	0	0	0	14
5:45 PM	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	3
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	58	0	51	3	0	0	0	4	0	0	116
APPROACH %'s :					0.00%	0.00%	100.00%	0.00%	94.44%	5.56%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	40	0	35	1	0	0	0	2	0	0	78
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.833	0.000	0.729	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.780
					0.833				0.692				0.250				

National Data & Surveying Services

Intersection Turning Movement Count

Location: United States Postal Service Dwy Access & Northside Dr
City: Cool
Control: No Control

Project ID: 19-07230-003
Date: 6/12/2019

Bikes

NS/EW Streets:	United States Postal Service Dwy Access				United States Postal Service Dwy Access				Northside Dr				Northside Dr				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :																	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

National Data & Surveying Services

Intersection Turning Movement Count

Location: United States Postal Service Dwy Access & Northside Dr
City: Cool

Project ID: 19-07230-003
Date: 6/12/2019

Pedestrians (Crosswalks)

NS/EW Streets:	United States Postal Service Dwy Access		United States Postal Service Dwy Access		Northside Dr		Northside Dr		
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0
APPROACH %'s :									
PEAK HR :	04:00 PM - 05:00 PM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

Prepared by National Data & Surveying Services

SR 49 & Kirkson Realty / Timberline Commercial Dwy

Peak Hour Turning Movement Count

ID: 19-07230-004
City: Cool

Day: Wednesday
Date: 06/12/2019

PEAK HOURS

AM	NONE
NOON	NONE
PM	04:30 PM - 05:30 PM

COUNT PERIODS

AM	NONE
NOON	NONE
PM	04:00 PM - 06:00 PM

SR 49

SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	34	547	0	0	273	PM

EASTBOUND — Kirkson Realty / Timberline Comm

AM	NOON	PM	
0	0	71	
0	0	0	0
0	0	20	0
0	0	0	0
0	0	25	0

WESTBOUND — Kirkson Realty / Timberline Comm

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	

CONTROL

No Control

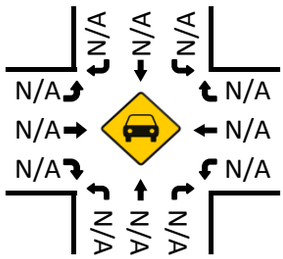
TEV	0 AM	0 NOON	917 PM
PHF			0.94

PM	573	1	37	253	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

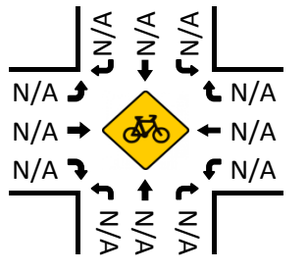
NORTHBOUND

SR 49

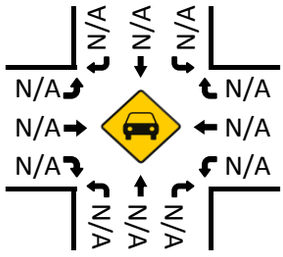
Total Vehicles (AM)



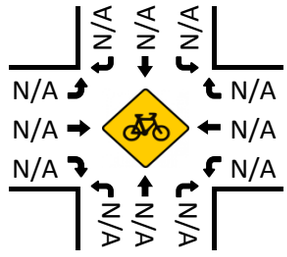
Bikes (AM)



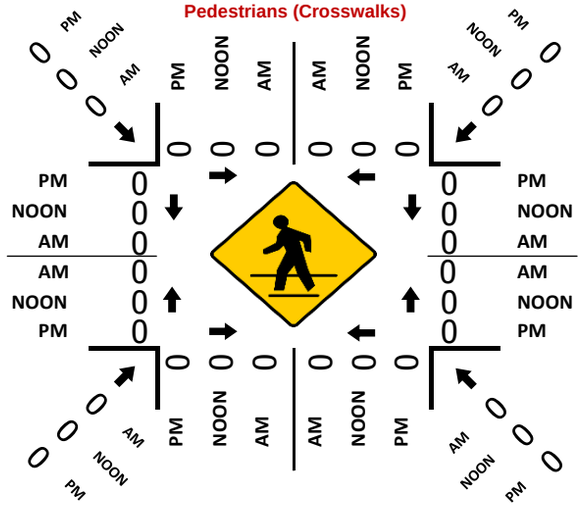
Total Vehicles (Noon)



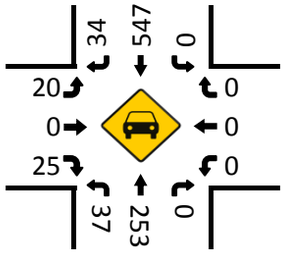
Bikes (NOON)



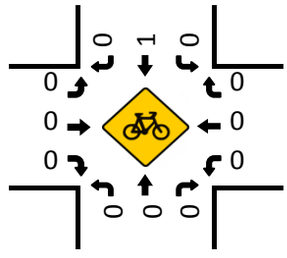
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & Kirkson Realty / Timberline Commercial Dwy
City: Cool
Control: No Control

Project ID: 19-07230-004
Date: 6/12/2019

Total

NS/EW Streets:	SR 49				SR 49				Kirkson Realty / Timberline Commercial Dwy				Kirkson Realty / Timberline Commercial Dwy				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	9	46	0	0	0	103	9	0	4	0	6	0	0	0	0	0	177
4:15 PM	2	73	0	0	0	103	5	0	2	0	4	0	0	0	0	0	189
4:30 PM	5	71	0	0	0	143	9	0	5	0	6	0	0	0	0	0	239
4:45 PM	5	61	0	0	0	125	9	0	4	0	0	0	0	0	0	0	204
5:00 PM	13	60	0	0	0	133	9	0	8	0	8	0	0	0	0	0	231
5:15 PM	14	61	0	1	0	146	7	0	3	0	11	0	0	0	0	0	243
5:30 PM	9	48	0	0	0	129	2	0	4	0	5	0	0	0	0	0	197
5:45 PM	8	55	0	1	0	122	6	0	2	0	5	0	0	0	0	0	199
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	65	475	0	2	0	1004	56	0	32	0	45	0	0	0	0	0	1679
APPROACH %'s :	11.99%	87.64%	0.00%	0.37%	0.00%	94.72%	5.28%	0.00%	41.56%	0.00%	58.44%	0.00%					
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	37	253	0	1	0	547	34	0	20	0	25	0	0	0	0	0	917
PEAK HR FACTOR :	0.661	0.891	0.000	0.250	0.000	0.937	0.944	0.000	0.625	0.000	0.568	0.000	0.000	0.000	0.000	0.000	0.943
	0.957				0.949				0.703								

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & Kirkson Realty / Timberline Commercial Dwy
City: Cool
Control: No Control

Project ID: 19-07230-004
Date: 6/12/2019

Bikes

NS/EW Streets:	SR 49				SR 49				Kirkson Realty / Timberline Commercial Dwy				Kirkson Realty / Timberline Commercial Dwy				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%									
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
						0.250											

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & Kirkson Realty / Timberline Commercial Dwy
City: Cool

Project ID: 19-07230-004
Date: 6/12/2019

Pedestrians (Crosswalks)

NS/EW Streets:	SR 49		SR 49		Kirkson Realty / Timberline Commercial		Kirkson Realty / Timberline Commercial		
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0
APPROACH %'s :									
PEAK HR :	**04:30 PM - 05:30 PM**								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

9470-02

Prepared by National Data & Surveying Services

SR 49 & SR 193

Peak Hour Turning Movement Count

ID: 19-07230-005
City: Cool

Day: Wednesday
Date: 06/12/2019

PEAK HOURS		COUNT PERIODS
NONE	AM	NONE
NONE	NOON	NONE
04:30 PM - 05:30 PM	PM	04:00 PM - 06:00 PM

SR 49 — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	14	213	374	0	296	PM

0 0 0 0

SR 193 — EASTBOUND

AM	NOON	PM	
0	0	47	
0	0	0	0
0	0	7	0
0	0	35	0
0	0	10	0
AM	NOON	PM	

SR 193 — WESTBOUND

	PM	NOON	AM
0	149	0	0
0	18	0	0
0	33	0	0
0	0	0	0
	467	0	0
	PM	NOON	AM

CONTROL

4-Way Stop

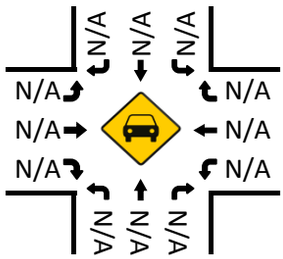
	AM	NOON	PM
TEV	0	0	1066
PHF			0.93

0 0 0 0

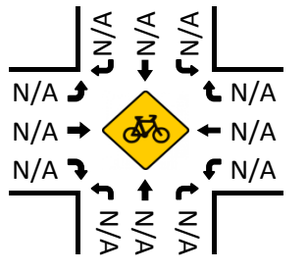
SR 49 — NORTHBOUND

PM	256	0	15	140	58	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

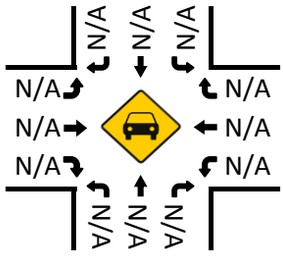
Total Vehicles (AM)



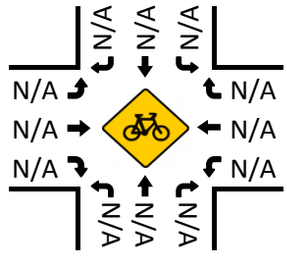
Bikes (AM)



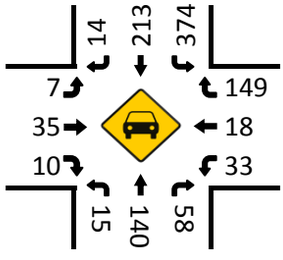
Total Vehicles (Noon)



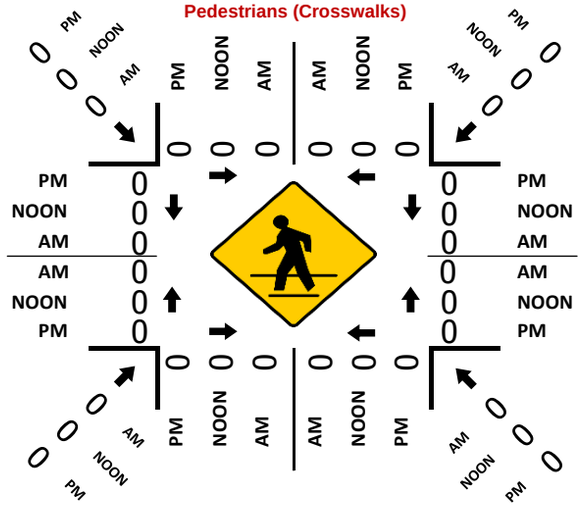
Bikes (NOON)



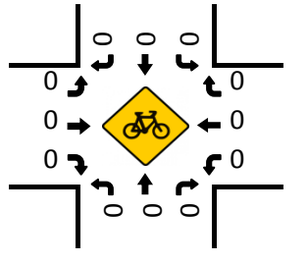
Total Vehicles (PM)



Pedestrians (Crosswalks)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & SR 193
City: Cool
Control: 4-Way Stop

Project ID: 19-07230-005
Date: 6/12/2019

Total

NS/EW Streets:	SR 49				SR 49				SR 193				SR 193				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	3	21	19	0	70	42	1	0	1	3	2	0	15	3	32	0	212
4:15 PM	4	27	13	0	74	36	1	4	3	5	1	0	10	2	44	0	224
4:30 PM	3	39	15	0	95	49	4	0	1	10	3	0	13	3	40	0	275
4:45 PM	4	34	6	0	87	45	5	0	1	7	2	0	3	6	35	0	235
5:00 PM	6	34	15	0	93	53	3	0	4	9	4	0	9	7	32	0	269
5:15 PM	2	33	22	0	99	66	2	0	1	9	1	0	8	2	42	0	287
5:30 PM	5	28	14	0	92	46	3	0	2	2	6	0	11	4	30	0	243
5:45 PM	4	34	20	0	88	49	2	0	0	6	3	0	11	10	32	0	259
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	31	250	124	0	698	386	21	4	13	51	22	0	80	37	287	0	2004
APPROACH %'s :	7.65%	61.73%	30.62%	0.00%	62.94%	34.81%	1.89%	0.36%	15.12%	59.30%	25.58%	0.00%	19.80%	9.16%	71.04%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	15	140	58	0	374	213	14	0	7	35	10	0	33	18	149	0	1066
PEAK HR FACTOR :	0.625	0.897	0.659	0.000	0.944	0.807	0.700	0.000	0.438	0.875	0.625	0.000	0.635	0.643	0.887	0.000	0.929
	0.934				0.900				0.765				0.893				

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & SR 193
City: Cool
Control: 4-Way Stop

Project ID: 19-07230-005
Date: 6/12/2019

Bikes

NS/EW Streets:	SR 49				SR 49				SR 193				SR 193				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
APPROACH %'s :													0.00%	0.00%	100.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & SR 193
City: Cool

Project ID: 19-07230-005
Date: 6/12/2019

Pedestrians (Crosswalks)

NS/EW Streets:	SR 49		SR 49		SR 193		SR 193		
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0
APPROACH %'s :									
PEAK HR :	**04:30 PM - 05:30 PM**								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	2	1	256	559	2
Future Vol, veh/h	1	2	1	256	559	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	135	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	1	278	608	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	888	608	610	0	-	0
Stage 1	608	-	-	-	-	-
Stage 2	280	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	314	496	969	-	-	-
Stage 1	543	-	-	-	-	-
Stage 2	767	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	314	496	969	-	-	-
Mov Cap-2 Maneuver	314	-	-	-	-	-
Stage 1	542	-	-	-	-	-
Stage 2	767	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	969	-	416	-	-
HCM Lane V/C Ratio	0.001	-	0.008	-	-
HCM Control Delay (s)	8.7	-	13.7	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	7	253	20	5	556
Future Vol, veh/h	25	7	253	20	5	556
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	130	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	8	275	22	5	604

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	900	286	0	0	297	0
Stage 1	286	-	-	-	-	-
Stage 2	614	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	309	753	-	-	1264	-
Stage 1	763	-	-	-	-	-
Stage 2	540	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	308	753	-	-	1264	-
Mov Cap-2 Maneuver	308	-	-	-	-	-
Stage 1	763	-	-	-	-	-
Stage 2	538	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.3	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	354	1264	-
HCM Lane V/C Ratio	-	-	0.098	0.004	-
HCM Control Delay (s)	-	-	16.3	7.9	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	25	38	253	547	34
Future Vol, veh/h	20	25	38	253	547	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	27	41	275	595	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	971	614	632	0	-	0
Stage 1	614	-	-	-	-	-
Stage 2	357	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	280	492	951	-	-	-
Stage 1	540	-	-	-	-	-
Stage 2	708	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	268	492	951	-	-	-
Mov Cap-2 Maneuver	390	-	-	-	-	-
Stage 1	517	-	-	-	-	-
Stage 2	708	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.2	1.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	951	-	441	-	-
HCM Lane V/C Ratio	0.043	-	0.111	-	-
HCM Control Delay (s)	9	-	14.2	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Intersection	
Intersection Delay, s/veh	17.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	35	10	33	18	149	15	140	58	374	213	14
Future Vol, veh/h	7	35	10	33	18	149	15	140	58	374	213	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	38	11	36	20	162	16	152	63	407	232	15
Number of Lanes	0	1	0	0	1	1	1	1	1	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	1
HCM Control Delay	11.5	11.9	12	22.1
HCM LOS	B	B	B	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	13%	65%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	67%	35%	0%	0%	100%	0%
Vol Right, %	0%	0%	100%	19%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	15	140	58	52	51	149	374	213	14
LT Vol	15	0	0	7	33	0	374	0	0
Through Vol	0	140	0	35	18	0	0	213	0
RT Vol	0	0	58	10	0	149	0	0	14
Lane Flow Rate	16	152	63	57	55	162	407	232	15
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.034	0.3	0.112	0.122	0.117	0.296	0.759	0.399	0.023
Departure Headway (Hd)	7.608	7.099	6.387	7.74	7.601	6.573	6.718	6.211	5.501
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	468	502	556	466	468	543	537	576	646
Service Time	5.404	4.895	4.182	5.44	5.395	4.367	4.489	3.981	3.271
HCM Lane V/C Ratio	0.034	0.303	0.113	0.122	0.118	0.298	0.758	0.403	0.023
HCM Control Delay	10.7	12.9	10	11.5	11.4	12.1	27.8	13.1	8.4
HCM Lane LOS	B	B	A	B	B	B	D	B	A
HCM 95th-tile Q	0.1	1.3	0.4	0.4	0.4	1.2	6.7	1.9	0.1

Intersection	
Int Delay, s/veh	7.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	35	1	2	0	0	40
Future Vol, veh/h	35	1	2	0	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	1	3	0	0	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	3	0	-	0	94	3
Stage 1	-	-	-	-	3	-
Stage 2	-	-	-	-	91	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1619	-	-	-	906	1081
Stage 1	-	-	-	-	1020	-
Stage 2	-	-	-	-	933	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1619	-	-	-	881	1081
Mov Cap-2 Maneuver	-	-	-	-	881	-
Stage 1	-	-	-	-	991	-
Stage 2	-	-	-	-	933	-

Approach	EB	WB	SB
HCM Control Delay, s	7.1	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1619	-	-	-	1081
HCM Lane V/C Ratio	0.028	-	-	-	0.047
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	2	1	258	561	2
Future Vol, veh/h	1	2	1	258	561	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	135	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	1	280	610	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	892	610	612	0	-	0
Stage 1	610	-	-	-	-	-
Stage 2	282	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	312	494	967	-	-	-
Stage 1	542	-	-	-	-	-
Stage 2	766	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	312	494	967	-	-	-
Mov Cap-2 Maneuver	312	-	-	-	-	-
Stage 1	541	-	-	-	-	-
Stage 2	766	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	967	-	414	-	-
HCM Lane V/C Ratio	0.001	-	0.008	-	-
HCM Control Delay (s)	8.7	-	13.8	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	50	12	250	43	14	549
Future Vol, veh/h	50	12	250	43	14	549
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	130	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	54	13	272	47	15	597

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	923	296	0	0	319	0
Stage 1	296	-	-	-	-	-
Stage 2	627	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	299	743	-	-	1241	-
Stage 1	755	-	-	-	-	-
Stage 2	532	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	295	743	-	-	1241	-
Mov Cap-2 Maneuver	295	-	-	-	-	-
Stage 1	755	-	-	-	-	-
Stage 2	526	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.5	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	334	1241	-
HCM Lane V/C Ratio	-	-	0.202	0.012	-
HCM Control Delay (s)	-	-	18.5	7.9	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.7	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	25	38	271	563	36
Future Vol, veh/h	22	25	38	271	563	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	27	41	295	612	39

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1009	632	651	0	-	0
Stage 1	632	-	-	-	-	-
Stage 2	377	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	266	480	935	-	-	-
Stage 1	530	-	-	-	-	-
Stage 2	694	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	254	480	935	-	-	-
Mov Cap-2 Maneuver	378	-	-	-	-	-
Stage 1	507	-	-	-	-	-
Stage 2	694	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.6	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	935	-	426	-	-
HCM Lane V/C Ratio	0.044	-	0.12	-	-
HCM Control Delay (s)	9	-	14.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Intersection	
Intersection Delay, s/veh	18.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	35	10	33	18	158	15	149	58	382	221	14
Future Vol, veh/h	7	35	10	33	18	158	15	149	58	382	221	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	38	11	36	20	172	16	162	63	415	240	15
Number of Lanes	0	1	0	0	1	1	1	1	1	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	1
HCM Control Delay	11.7	12.4	12.5	23.8
HCM LOS	B	B	B	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	13%	65%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	67%	35%	0%	0%	100%	0%
Vol Right, %	0%	0%	100%	19%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	15	149	58	52	51	158	382	221	14
LT Vol	15	0	0	7	33	0	382	0	0
Through Vol	0	149	0	35	18	0	0	221	0
RT Vol	0	0	58	10	0	158	0	0	14
Lane Flow Rate	16	162	63	57	55	172	415	240	15
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.035	0.328	0.115	0.124	0.12	0.323	0.784	0.42	0.024
Departure Headway (Hd)	7.802	7.292	6.579	7.874	7.791	6.775	6.898	6.39	5.679
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	461	496	547	457	462	534	527	567	634
Service Time	5.52	5.01	4.297	5.595	5.504	4.475	4.598	4.09	3.379
HCM Lane V/C Ratio	0.035	0.327	0.115	0.125	0.119	0.322	0.787	0.423	0.024
HCM Control Delay	10.8	13.5	10.2	11.7	11.6	12.7	30.2	13.6	8.5
HCM Lane LOS	B	B	B	B	B	B	D	B	A
HCM 95th-tile Q	0.1	1.4	0.4	0.4	0.4	1.4	7.2	2.1	0.1

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	35	33	32	0	0	40
Future Vol, veh/h	35	33	32	0	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	42	41	0	0	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	41	0	-	0	173	41
Stage 1	-	-	-	-	41	-
Stage 2	-	-	-	-	132	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1568	-	-	-	817	1030
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	894	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1568	-	-	-	793	1030
Mov Cap-2 Maneuver	-	-	-	-	793	-
Stage 1	-	-	-	-	953	-
Stage 2	-	-	-	-	894	-

Approach	EB	WB	SB
HCM Control Delay, s	3.8	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1568	-	-	-	1030
HCM Lane V/C Ratio	0.029	-	-	-	0.05
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	4.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	32	0	2	30	0
Future Vol, veh/h	0	32	0	2	30	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	35	0	2	33	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	35	0	20	18
Stage 1	-	-	-	-	18	-
Stage 2	-	-	-	-	2	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1576	-	997	1061
Stage 1	-	-	-	-	1005	-
Stage 2	-	-	-	-	1021	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1576	-	997	1061
Mov Cap-2 Maneuver	-	-	-	-	997	-
Stage 1	-	-	-	-	1005	-
Stage 2	-	-	-	-	1021	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	997	-	-	1576	-
HCM Lane V/C Ratio	0.033	-	-	-	-
HCM Control Delay (s)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	30	15	370	665	25
Future Vol, veh/h	15	30	15	370	665	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	135	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	33	16	402	723	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1157	723	750	0	-	0
Stage 1	723	-	-	-	-	-
Stage 2	434	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	217	426	859	-	-	-
Stage 1	481	-	-	-	-	-
Stage 2	653	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	213	426	859	-	-	-
Mov Cap-2 Maneuver	213	-	-	-	-	-
Stage 1	472	-	-	-	-	-
Stage 2	653	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.3	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	859	-	320	-	-
HCM Lane V/C Ratio	0.019	-	0.153	-	-
HCM Control Delay (s)	9.3	-	18.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	10	375	20	5	690
Future Vol, veh/h	25	10	375	20	5	690
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	130	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	11	408	22	5	750

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1179	419	0	0	430	0
Stage 1	419	-	-	-	-	-
Stage 2	760	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	211	634	-	-	1129	-
Stage 1	664	-	-	-	-	-
Stage 2	462	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	210	634	-	-	1129	-
Mov Cap-2 Maneuver	210	-	-	-	-	-
Stage 1	664	-	-	-	-	-
Stage 2	460	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.2	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	260	1129	-
HCM Lane V/C Ratio	-	-	0.146	0.005	-
HCM Control Delay (s)	-	-	21.2	8.2	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	25	40	375	680	35
Future Vol, veh/h	20	25	40	375	680	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	27	43	408	739	38

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1252	758	777	0	-	0
Stage 1	758	-	-	-	-	-
Stage 2	494	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	190	407	839	-	-	-
Stage 1	463	-	-	-	-	-
Stage 2	613	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	180	407	839	-	-	-
Mov Cap-2 Maneuver	312	-	-	-	-	-
Stage 1	439	-	-	-	-	-
Stage 2	613	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.6	0.9	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	839	-	358	-	-
HCM Lane V/C Ratio	0.052	-	0.137	-	-
HCM Control Delay (s)	9.5	-	16.6	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.5	-	-

Intersection	
Intersection Delay, s/veh	30.6
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	35	15	40	15	185	20	230	75	420	300	15
Future Vol, veh/h	10	35	15	40	15	185	20	230	75	420	300	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	38	16	43	16	201	22	250	82	457	326	16
Number of Lanes	0	1	0	0	1	1	1	1	1	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	1
HCM Control Delay	13.4	15.2	17.6	42.8
HCM LOS	B	C	C	E

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	17%	73%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	58%	27%	0%	0%	100%	0%
Vol Right, %	0%	0%	100%	25%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	230	75	60	55	185	420	300	15
LT Vol	20	0	0	10	40	0	420	0	0
Through Vol	0	230	0	35	15	0	0	300	0
RT Vol	0	0	75	15	0	185	0	0	15
Lane Flow Rate	22	250	82	65	60	201	457	326	16
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.051	0.553	0.164	0.161	0.144	0.425	0.959	0.639	0.029
Departure Headway (Hd)	8.473	7.961	7.243	8.866	8.686	7.609	7.562	7.051	6.336
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	422	453	494	404	412	473	479	512	564
Service Time	6.235	5.722	5.004	6.644	6.449	5.371	5.315	4.804	4.089
HCM Lane V/C Ratio	0.052	0.552	0.166	0.161	0.146	0.425	0.954	0.637	0.028
HCM Control Delay	11.7	20.2	11.4	13.4	12.9	15.9	59.2	21.5	9.3
HCM Lane LOS	B	C	B	B	B	C	F	C	A
HCM 95th-tile Q	0.2	3.3	0.6	0.6	0.5	2.1	11.9	4.4	0.1

Intersection	
Int Delay, s/veh	7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	35	5	5	0	0	40
Future Vol, veh/h	35	5	5	0	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	6	6	0	0	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	6	0	-	0	102	6
Stage 1	-	-	-	-	6	-
Stage 2	-	-	-	-	96	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1615	-	-	-	896	1077
Stage 1	-	-	-	-	1017	-
Stage 2	-	-	-	-	928	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1615	-	-	-	871	1077
Mov Cap-2 Maneuver	-	-	-	-	871	-
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	928	-

Approach	EB	WB	SB
HCM Control Delay, s	6.4	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1615	-	-	-	1077
HCM Lane V/C Ratio	0.028	-	-	-	0.048
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	0	0	5	0	0
Future Vol, veh/h	5	0	0	5	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	0	0	5	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	5	0	10	5
Stage 1	-	-	-	-	5	-
Stage 2	-	-	-	-	5	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1616	-	1010	1078
Stage 1	-	-	-	-	1018	-
Stage 2	-	-	-	-	1018	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1616	-	1010	1078
Mov Cap-2 Maneuver	-	-	-	-	1010	-
Stage 1	-	-	-	-	1018	-
Stage 2	-	-	-	-	1018	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1616	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	30	15	372	667	25
Future Vol, veh/h	15	30	15	372	667	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	135	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	33	16	404	725	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1161	725	752	0	-	0
Stage 1	725	-	-	-	-	-
Stage 2	436	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	216	425	858	-	-	-
Stage 1	479	-	-	-	-	-
Stage 2	652	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	212	425	858	-	-	-
Mov Cap-2 Maneuver	212	-	-	-	-	-
Stage 1	470	-	-	-	-	-
Stage 2	652	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.4	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	858	-	318	-	-
HCM Lane V/C Ratio	0.019	-	0.154	-	-
HCM Control Delay (s)	9.3	-	18.4	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	48	17	370	45	13	684
Future Vol, veh/h	48	17	370	45	13	684
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	130	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	18	402	49	14	743

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1198	427	0	0	451	0
Stage 1	427	-	-	-	-	-
Stage 2	771	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	205	628	-	-	1109	-
Stage 1	658	-	-	-	-	-
Stage 2	456	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	202	628	-	-	1109	-
Mov Cap-2 Maneuver	202	-	-	-	-	-
Stage 1	658	-	-	-	-	-
Stage 2	450	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.4	0	0.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	246	1109	-
HCM Lane V/C Ratio	-	-	0.287	0.013	-
HCM Control Delay (s)	-	-	25.4	8.3	-
HCM Lane LOS	-	-	D	A	-
HCM 95th %tile Q(veh)	-	-	1.1	0	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	25	40	393	696	37
Future Vol, veh/h	22	25	40	393	696	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	27	43	427	757	40

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1290	777	797	0	-	0
Stage 1	777	-	-	-	-	-
Stage 2	513	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	180	397	825	-	-	-
Stage 1	453	-	-	-	-	-
Stage 2	601	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	171	397	825	-	-	-
Mov Cap-2 Maneuver	303	-	-	-	-	-
Stage 1	429	-	-	-	-	-
Stage 2	601	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.2	0.9	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	825	-	347	-	-
HCM Lane V/C Ratio	0.053	-	0.147	-	-
HCM Control Delay (s)	9.6	-	17.2	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.5	-	-

Intersection	
Intersection Delay, s/veh	33.7
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	35	15	40	15	194	20	239	75	428	308	15
Future Vol, veh/h	10	35	15	40	15	194	20	239	75	428	308	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	38	16	43	16	211	22	260	82	465	335	16
Number of Lanes	0	1	0	0	1	1	1	1	1	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	1
HCM Control Delay	13.6	15.9	18.8	47.8
HCM LOS	B	C	C	E

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	17%	73%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	58%	27%	0%	0%	100%	0%
Vol Right, %	0%	0%	100%	25%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	239	75	60	55	194	428	308	15
LT Vol	20	0	0	10	40	0	428	0	0
Through Vol	0	239	0	35	15	0	0	308	0
RT Vol	0	0	75	15	0	194	0	0	15
Lane Flow Rate	22	260	82	65	60	211	465	335	16
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.052	0.582	0.166	0.163	0.146	0.452	0.99	0.665	0.029
Departure Headway (Hd)	8.582	8.069	7.35	9.017	8.788	7.71	7.662	7.151	6.435
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	417	447	487	397	408	466	475	506	555
Service Time	6.349	5.835	5.116	6.802	6.554	5.475	5.421	4.909	4.193
HCM Lane V/C Ratio	0.053	0.582	0.168	0.164	0.147	0.453	0.979	0.662	0.029
HCM Control Delay	11.8	21.6	11.6	13.6	13.1	16.7	66.9	23.1	9.4
HCM Lane LOS	B	C	B	B	B	C	F	C	A
HCM 95th-tile Q	0.2	3.6	0.6	0.6	0.5	2.3	12.9	4.8	0.1

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	35	38	35	0	0	40
Future Vol, veh/h	35	38	35	0	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	49	45	0	0	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	45	0	-	0	184	45
Stage 1	-	-	-	-	45	-
Stage 2	-	-	-	-	139	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1563	-	-	-	805	1025
Stage 1	-	-	-	-	977	-
Stage 2	-	-	-	-	888	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1563	-	-	-	781	1025
Mov Cap-2 Maneuver	-	-	-	-	781	-
Stage 1	-	-	-	-	948	-
Stage 2	-	-	-	-	888	-

Approach	EB	WB	SB
HCM Control Delay, s	3.5	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1563	-	-	-	1025
HCM Lane V/C Ratio	0.029	-	-	-	0.05
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	3.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	33	0	5	30	0
Future Vol, veh/h	5	33	0	5	30	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	36	0	5	33	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	41	0	28	23
Stage 1	-	-	-	-	23	-
Stage 2	-	-	-	-	5	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1568	-	987	1054
Stage 1	-	-	-	-	1000	-
Stage 2	-	-	-	-	1018	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1568	-	987	1054
Mov Cap-2 Maneuver	-	-	-	-	987	-
Stage 1	-	-	-	-	1000	-
Stage 2	-	-	-	-	1018	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	987	-	-	1568	-
HCM Lane V/C Ratio	0.033	-	-	-	-
HCM Control Delay (s)	8.8	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	kda
Agency/Co.	
Date Performed	3/9/2020
Analysis Time Period	PM Peak
Highway	SR 49
From/To	Auburn to Sr 193
Jurisdiction	Caltrans
Analysis Year	2019
Description	Cool Dollar General

Input Data

Highway class	Class 1		Peak hour factor, PHF	0.92	
Shoulder width	2.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	8.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Rolling		% Recreational vehicles	4	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	8	/mi

Analysis direction volume, Vd 257 veh/h
Opposing direction volume, Vo 561 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	2.1		1.7	
PCE for RVs, ER	1.1		1.1	
Heavy-vehicle adj. factor,(note-5) fHV	0.935		0.956	
Grade adj. factor,(note-1) fg	0.81		0.97	
Directional flow rate,(note-2) vi	369	pc/h	658	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	2.6	mi/h
Adj. for access point density,(note-3) fA	2.0	mi/h
Free-flow speed, FFSd	50.4	mi/h
Adjustment for no-passing zones, fnp	1.7	mi/h
Average travel speed, ATSd	40.7	mi/h
Percent Free Flow Speed, PFFS	80.8	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.7	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.960	1.000
Grade adjustment factor,(note-1) fg	0.84	0.97
Directional flow rate,(note-2) vi	347 pc/h	629 pc/h
Base percent time-spent-following,(note-4) BPTSFd	42.4 %	
Adjustment for no-passing zones, fnp	32.4	
Percent time-spent-following, PTSFd	53.9 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.22	
Peak 15-min vehicle-miles of travel, VMT15	559	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2056	veh-mi
Peak 15-min total travel time, TT15	13.7	veh-h
Capacity from ATS, CdATS	1576	veh/h
Capacity from PTSF, CdPTSF	1666	veh/h
Directional Capacity	1576	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	8.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	40.7	mi/h
Percent time-spent-following, PTSFd (from above)	53.9	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	279.3
Effective width of outside lane, We	14.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.24
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	kda
Agency/Co.	
Date Performed	3/9/2020
Analysis Time Period	PM Peak
Highway	SR 49
From/To	Auburn to Sr 193
Jurisdiction	Caltrans
Analysis Year	2019
Description	Cool Dollar General

Input Data

Highway class	Class 1		Peak hour factor, PHF	0.92	
Shoulder width	2.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	8.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Rolling		% Recreational vehicles	4	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	8	/mi

Analysis direction volume, Vd	561	veh/h
Opposing direction volume, Vo	257	veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.7		2.1	
PCE for RVs, ER	1.1		1.1	
Heavy-vehicle adj. factor,(note-5) fHV	0.956		0.935	
Grade adj. factor,(note-1) fg	0.97		0.81	
Directional flow rate,(note-2) vi	658	pc/h	369	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	2.6	mi/h
Adj. for access point density,(note-3) fA	2.0	mi/h
Free-flow speed, FFSd	50.4	mi/h
Adjustment for no-passing zones, fnp	2.9	mi/h
Average travel speed, ATSd	39.5	mi/h
Percent Free Flow Speed, PFFS	78.4	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.7
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	0.960
Grade adjustment factor,(note-1) fg	0.97	0.84
Directional flow rate,(note-2) vi	629 pc/h	347 pc/h
Base percent time-spent-following,(note-4) BPTSFd	56.5 %	
Adjustment for no-passing zones, fnp	32.4	
Percent time-spent-following, PTSFd	77.4 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.39	
Peak 15-min vehicle-miles of travel, VMT15	1220	veh-mi
Peak-hour vehicle-miles of travel, VMT60	4488	veh-mi
Peak 15-min total travel time, TT15	30.9	veh-h
Capacity from ATS, CdATS	1367	veh/h
Capacity from PTSF, CdPTSF	1428	veh/h
Directional Capacity	1367	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	8.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	39.5	mi/h
Percent time-spent-following, PTSFd (from above)	77.4	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	609.8
Effective width of outside lane, We	14.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.64
Bicycle LOS	F

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	kda
Agency/Co.	
Date Performed	3/9/2020
Analysis Time Period	PM Peak
Highway	SR 49
From/To	SR 193 TO COLOMA
Jurisdiction	Caltrans
Analysis Year	2019
Description	Cool Dollar General

Input Data

Highway class	Class 1		Peak hour factor, PHF	0.92	
Shoulder width	2.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	8.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Rolling		% Recreational vehicles	4	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	8	/mi

Analysis direction volume, Vd	213	veh/h
Opposing direction volume, Vo	256	veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	2.2		2.1	
PCE for RVs, ER	1.1		1.1	
Heavy-vehicle adj. factor,(note-5) fHV	0.929		0.935	
Grade adj. factor,(note-1) fg	0.78		0.81	
Directional flow rate,(note-2) vi	320	pc/h	367	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	2.6	mi/h
Adj. for access point density,(note-3) fA	2.0	mi/h
Free-flow speed, FFSd	50.4	mi/h
Adjustment for no-passing zones, fnp	2.9	mi/h
Average travel speed, ATSd	42.1	mi/h
Percent Free Flow Speed, PFFS	83.6	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.7	1.7
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.960	0.960
Grade adjustment factor,(note-1) fg	0.82	0.84
Directional flow rate,(note-2) vi	294 pc/h	345 pc/h
Base percent time-spent-following,(note-4) BPTSFd	33.7 %	
Adjustment for no-passing zones, fnp	53.5	
Percent time-spent-following, PTSFd	58.3 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.19	
Peak 15-min vehicle-miles of travel, VMT15	463	veh-mi
Peak-hour vehicle-miles of travel, VMT60	1704	veh-mi
Peak 15-min total travel time, TT15	11.0	veh-h
Capacity from ATS, CdATS	1367	veh/h
Capacity from PTSF, CdPTSF	1428	veh/h
Directional Capacity	1367	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	8.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	42.1	mi/h
Percent time-spent-following, PTSFd (from above)	58.3	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	231.5
Effective width of outside lane, We	14.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.15
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

HCS 2010: Two-Lane Highways Release 6.50

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	kda
Agency/Co.	
Date Performed	3/9/2020
Analysis Time Period	PM Peak
Highway	SR 49
From/To	SR 193 TO COLOMA
Jurisdiction	Caltrans
Analysis Year	2019
Description	Cool Dollar General

Input Data

Highway class	Class 1		Peak hour factor, PHF	0.92	
Shoulder width	2.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	8.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Rolling		% Recreational vehicles	4	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	8	/mi

Analysis direction volume, Vd 256 veh/h
Opposing direction volume, Vo 213 veh/h

Average Travel Speed

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	2.1	2.2
PCE for RVs, ER	1.1	1.1
Heavy-vehicle adj. factor,(note-5) fHV	0.935	0.929
Grade adj. factor,(note-1) fg	0.81	0.78
Directional flow rate,(note-2) vi	367 pc/h	320 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	2.6	mi/h
Adj. for access point density,(note-3) fA	2.0	mi/h
Free-flow speed, FFSd	50.4	mi/h
Adjustment for no-passing zones, fnp	3.2	mi/h
Average travel speed, ATSd	41.8	mi/h
Percent Free Flow Speed, PFFS	83.0	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.7	1.7
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.960	0.960
Grade adjustment factor,(note-1) fg	0.84	0.82
Directional flow rate,(note-2) vi	345 pc/h	294 pc/h
Base percent time-spent-following,(note-4) BPTSFd	36.9 %	
Adjustment for no-passing zones, fnp	53.5	
Percent time-spent-following, PTSFd	65.8 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.22	
Peak 15-min vehicle-miles of travel, VMT15	557	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2048	veh-mi
Peak 15-min total travel time, TT15	13.3	veh-h
Capacity from ATS, CdATS	1319	veh/h
Capacity from PTSF, CdPTSF	1387	veh/h
Directional Capacity	1319	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	8.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	41.8	mi/h
Percent time-spent-following, PTSFd (from above)	65.8	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	278.3
Effective width of outside lane, We	14.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.24
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	kda
Agency/Co.	
Date Performed	3/9/2020
Analysis Time Period	PM Peak
Highway	SR 193
From/To	SR 49 TO GEORGETOWN
Jurisdiction	Caltrans
Analysis Year	2019
Description	Cool Dollar General

Input Data

Highway class	Class 1		Peak hour factor, PHF	0.92	
Shoulder width	2.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	8.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Rolling		% Recreational vehicles	4	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	8	/mi

Analysis direction volume, Vd	467	veh/h
Opposing direction volume, Vo	200	veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.8		2.3	
PCE for RVs, ER	1.1		1.1	
Heavy-vehicle adj. factor,(note-5) fHV	0.951		0.924	
Grade adj. factor,(note-1) fg	0.95		0.76	
Directional flow rate,(note-2) vi	562	pc/h	310	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	2.6	mi/h
Adj. for access point density,(note-3) fA	2.0	mi/h
Free-flow speed, FFSd	50.4	mi/h
Adjustment for no-passing zones, fnp	3.3	mi/h
Average travel speed, ATSd	40.3	mi/h
Percent Free Flow Speed, PFFS	80.0	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.2	1.7
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.988	0.960
Grade adjustment factor,(note-1) fg	0.96	0.81
Directional flow rate,(note-2) vi	535 pc/h	280 pc/h
Base percent time-spent-following,(note-4) BPTSFd	49.2 %	
Adjustment for no-passing zones, fnp	35.2	
Percent time-spent-following, PTSFd	72.3 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.33	
Peak 15-min vehicle-miles of travel, VMT15	1015	veh-mi
Peak-hour vehicle-miles of travel, VMT60	3736	veh-mi
Peak 15-min total travel time, TT15	25.2	veh-h
Capacity from ATS, CdATS	1287	veh/h
Capacity from PTSF, CdPTSF	1370	veh/h
Directional Capacity	1287	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	8.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	40.3	mi/h
Percent time-spent-following, PTSFd (from above)	72.3	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	507.6
Effective width of outside lane, We	14.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.54
Bicycle LOS	F

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	kda
Agency/Co.	
Date Performed	3/9/2020
Analysis Time Period	PM Peak
Highway	SR 193
From/To	SR 49 TO GEORGETOWN
Jurisdiction	Caltrans
Analysis Year	2019
Description	Cool Dollar General

Input Data

Highway class	Class 1		Peak hour factor, PHF	0.92	
Shoulder width	2.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	8.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Rolling		% Recreational vehicles	4	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	8	/mi

Analysis direction volume, Vd	200	veh/h
Opposing direction volume, Vo	467	veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	2.3		1.8	
PCE for RVs, ER	1.1		1.1	
Heavy-vehicle adj. factor,(note-5) fHV	0.924		0.951	
Grade adj. factor,(note-1) fg	0.76		0.95	
Directional flow rate,(note-2) vi	310	pc/h	562	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	2.6	mi/h
Adj. for access point density,(note-3) fA	2.0	mi/h
Free-flow speed, FFSd	50.4	mi/h
Adjustment for no-passing zones, fnp	2.1	mi/h
Average travel speed, ATSd	41.6	mi/h
Percent Free Flow Speed, PFFS	82.5	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.7	1.2
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.960	0.988
Grade adjustment factor,(note-1) fg	0.81	0.96
Directional flow rate,(note-2) vi	280 pc/h	535 pc/h
Base percent time-spent-following,(note-4) BPTSFd	34.9 %	
Adjustment for no-passing zones, fnp	35.2	
Percent time-spent-following, PTSFd	47.0 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.18	
Peak 15-min vehicle-miles of travel, VMT15	435	veh-mi
Peak-hour vehicle-miles of travel, VMT60	1600	veh-mi
Peak 15-min total travel time, TT15	10.5	veh-h
Capacity from ATS, CdATS	1552	veh/h
Capacity from PTSF, CdPTSF	1613	veh/h
Directional Capacity	1552	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	8.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	41.6	mi/h
Percent time-spent-following, PTSFd (from above)	47.0	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	217.4
Effective width of outside lane, We	14.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.11
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	kda
Agency/Co.	
Date Performed	3/9/2020
Analysis Time Period	PM Peak
Highway	SR 49
From/To	Auburn to Sr 193
Jurisdiction	Caltrans
Analysis Year	2019 plus DOLLAR GENERAL
Description	Cool Dollar General

Input Data

Highway class	Class 1		Peak hour factor, PHF	0.92	
Shoulder width	2.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	8.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Rolling		% Recreational vehicles	4	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	8	/mi

Analysis direction volume, Vd	259	veh/h
Opposing direction volume, Vo	563	veh/h

Average Travel Speed

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	2.1	1.7
PCE for RVs, ER	1.1	1.1
Heavy-vehicle adj. factor,(note-5) fHV	0.935	0.956
Grade adj. factor,(note-1) fg	0.82	0.97
Directional flow rate,(note-2) vi	367 pc/h	660 pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	2.6	mi/h
Adj. for access point density,(note-3) fA	2.0	mi/h
Free-flow speed, FFSd	50.4	mi/h
Adjustment for no-passing zones, fnp	1.7	mi/h
Average travel speed, ATSd	40.7	mi/h
Percent Free Flow Speed, PFFS	80.8	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.7	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.960	1.000
Grade adjustment factor,(note-1) fg	0.84	0.97
Directional flow rate,(note-2) vi	349 pc/h	631 pc/h
Base percent time-spent-following,(note-4) BPTSFd	42.4 %	
Adjustment for no-passing zones, fnp	32.4	
Percent time-spent-following, PTSFd	53.9 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.22	
Peak 15-min vehicle-miles of travel, VMT15	563	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2072	veh-mi
Peak 15-min total travel time, TT15	13.8	veh-h
Capacity from ATS, CdATS	1576	veh/h
Capacity from PTSF, CdPTSF	1666	veh/h
Directional Capacity	1576	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	8.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	40.7	mi/h
Percent time-spent-following, PTSFd (from above)	53.9	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	281.5
Effective width of outside lane, We	14.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.25
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

HCS 2010: Two-Lane Highways Release 6.50

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	kda
Agency/Co.	
Date Performed	3/9/2020
Analysis Time Period	PM Peak
Highway	SR 49
From/To	Auburn to Sr 193
Jurisdiction	Caltrans
Analysis Year	2019 plus DOLLAR GENERAL
Description	Cool Dollar General

Input Data

Highway class	Class 1		Peak hour factor, PHF	0.92	
Shoulder width	2.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	8.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Rolling		% Recreational vehicles	4	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	8	/mi

Analysis direction volume, Vd 563 veh/h
Opposing direction volume, Vo 259 veh/h

Average Travel Speed

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.7	2.1
PCE for RVs, ER	1.1	1.1
Heavy-vehicle adj. factor,(note-5) fHV	0.956	0.935
Grade adj. factor,(note-1) fg	0.97	0.82
Directional flow rate,(note-2) vi	660 pc/h	367 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	2.6	mi/h
Adj. for access point density,(note-3) fA	2.0	mi/h
Free-flow speed, FFSd	50.4	mi/h
Adjustment for no-passing zones, fnp	2.9	mi/h
Average travel speed, ATSd	39.5	mi/h
Percent Free Flow Speed, PFFS	78.4	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.7
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	0.960
Grade adjustment factor,(note-1) fg	0.97	0.84
Directional flow rate,(note-2) vi	631 pc/h	349 pc/h
Base percent time-spent-following,(note-4) BPTSFd	56.6 %	
Adjustment for no-passing zones, fnp	32.4	
Percent time-spent-following, PTSFd	77.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.39	
Peak 15-min vehicle-miles of travel, VMT15	1224	veh-mi
Peak-hour vehicle-miles of travel, VMT60	4504	veh-mi
Peak 15-min total travel time, TT15	31.0	veh-h
Capacity from ATS, CdATS	1367	veh/h
Capacity from PTSF, CdPTSF	1428	veh/h
Directional Capacity	1367	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	8.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	39.5	mi/h
Percent time-spent-following, PTSFd (from above)	77.5	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	612.0
Effective width of outside lane, We	14.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.64
Bicycle LOS	F

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	kda
Agency/Co.	
Date Performed	3/9/2020
Analysis Time Period	PM Peak
Highway	SR 49
From/To	SR 193 TO COLOMA
Jurisdiction	Caltrans
Analysis Year	2019 PLUS DOLLAR GENERAL
Description	Cool Dollar General

Input Data

Highway class	Class 1		Peak hour factor, PHF	0.92	
Shoulder width	2.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	8.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Rolling		% Recreational vehicles	4	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	8	/mi

Analysis direction volume, Vd	222	veh/h
Opposing direction volume, Vo	264	veh/h

Average Travel Speed

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	2.2	2.1
PCE for RVs, ER	1.1	1.1
Heavy-vehicle adj. factor,(note-5) fHV	0.929	0.935
Grade adj. factor,(note-1) fg	0.78	0.82
Directional flow rate,(note-2) vi	333 pc/h	374 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	2.6	mi/h
Adj. for access point density,(note-3) fA	2.0	mi/h
Free-flow speed, FFSd	50.4	mi/h
Adjustment for no-passing zones, fnp	2.9	mi/h
Average travel speed, ATSd	42.0	mi/h
Percent Free Flow Speed, PFFS	83.4	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.7	1.7
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.960	0.960
Grade adjustment factor,(note-1) fg	0.82	0.84
Directional flow rate,(note-2) vi	307 pc/h	356 pc/h
Base percent time-spent-following,(note-4) BPTSFd	34.3 %	
Adjustment for no-passing zones, fnp	52.2	
Percent time-spent-following, PTSFd	58.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.20	
Peak 15-min vehicle-miles of travel, VMT15	483	veh-mi
Peak-hour vehicle-miles of travel, VMT60	1776	veh-mi
Peak 15-min total travel time, TT15	11.5	veh-h
Capacity from ATS, CdATS	1390	veh/h
Capacity from PTSF, CdPTSF	1444	veh/h
Directional Capacity	1390	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	8.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	42.0	mi/h
Percent time-spent-following, PTSFd (from above)	58.5	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	241.3
Effective width of outside lane, We	14.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.17
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

HCS 2010: Two-Lane Highways Release 6.50

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	kda
Agency/Co.	
Date Performed	3/9/2020
Analysis Time Period	PM Peak
Highway	SR 49
From/To	SR 193 TO COLOMA
Jurisdiction	Caltrans
Analysis Year	2019 PLUS DOLLAR GENERAL
Description	Cool Dollar General

Input Data

Highway class	Class 1		Peak hour factor, PHF	0.92	
Shoulder width	2.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	8.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Rolling		% Recreational vehicles	4	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	8	/mi

Analysis direction volume, Vd 264 veh/h
Opposing direction volume, Vo 222 veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	2.1		2.2	
PCE for RVs, ER	1.1		1.1	
Heavy-vehicle adj. factor,(note-5) fHV	0.935		0.929	
Grade adj. factor,(note-1) fg	0.82		0.78	
Directional flow rate,(note-2) vi	374	pc/h	333	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	2.6	mi/h
Adj. for access point density,(note-3) fA	2.0	mi/h
Free-flow speed, FFSd	50.4	mi/h
Adjustment for no-passing zones, fnp	3.1	mi/h
Average travel speed, ATSd	41.8	mi/h
Percent Free Flow Speed, PFFS	82.9	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.7	1.7
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.960	0.960
Grade adjustment factor,(note-1) fg	0.84	0.82
Directional flow rate,(note-2) vi	356 pc/h	307 pc/h
Base percent time-spent-following,(note-4) BPTSFd	37.3 %	
Adjustment for no-passing zones, fnp	52.2	
Percent time-spent-following, PTSFd	65.3 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.22	
Peak 15-min vehicle-miles of travel, VMT15	574	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2112	veh-mi
Peak 15-min total travel time, TT15	13.7	veh-h
Capacity from ATS, CdATS	1319	veh/h
Capacity from PTSF, CdPTSF	1395	veh/h
Directional Capacity	1319	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	8.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	41.8	mi/h
Percent time-spent-following, PTSFd (from above)	65.3	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	287.0
Effective width of outside lane, We	14.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.25
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	kda
Agency/Co.	
Date Performed	3/9/2020
Analysis Time Period	PM Peak
Highway	SR 193
From/To	SR 49 TO GEORGETOWN
Jurisdiction	Caltrans
Analysis Year	2019 PLUS DOLLAR GENEAL
Description	Cool Dollar General

Input Data

Highway class	Class 1		Peak hour factor, PHF	0.92	
Shoulder width	2.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	8.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Rolling		% Recreational vehicles	4	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	8	/mi

Analysis direction volume, Vd	475	veh/h
Opposing direction volume, Vo	209	veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.8		2.2	
PCE for RVs, ER	1.1		1.1	
Heavy-vehicle adj. factor,(note-5) fHV	0.951		0.929	
Grade adj. factor,(note-1) fg	0.95		0.77	
Directional flow rate,(note-2) vi	571	pc/h	318	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	2.6	mi/h
Adj. for access point density,(note-3) fA	2.0	mi/h
Free-flow speed, FFSd	50.4	mi/h
Adjustment for no-passing zones, fnp	3.2	mi/h
Average travel speed, ATSd	40.3	mi/h
Percent Free Flow Speed, PFFS	79.9	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.2	1.7
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.988	0.960
Grade adjustment factor,(note-1) fg	0.96	0.81
Directional flow rate,(note-2) vi	544 pc/h	292 pc/h
Base percent time-spent-following,(note-4) BPTSFd	51.1 %	
Adjustment for no-passing zones, fnp	35.0	
Percent time-spent-following, PTSFd	73.9 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.34	
Peak 15-min vehicle-miles of travel, VMT15	1033	veh-mi
Peak-hour vehicle-miles of travel, VMT60	3800	veh-mi
Peak 15-min total travel time, TT15	25.7	veh-h
Capacity from ATS, CdATS	1303	veh/h
Capacity from PTSF, CdPTSF	1387	veh/h
Directional Capacity	1303	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	8.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	40.3	mi/h
Percent time-spent-following, PTSFd (from above)	73.9	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	516.3
Effective width of outside lane, We	14.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.55
Bicycle LOS	F

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	kda
Agency/Co.	
Date Performed	3/9/2020
Analysis Time Period	PM Peak
Highway	SR 193
From/To	SR 49 TO GEORGETOWN
Jurisdiction	Caltrans
Analysis Year	2019 PLUS DOLLAR GENEAL
Description	Cool Dollar General

Input Data

Highway class	Class 1		Peak hour factor, PHF	0.92	
Shoulder width	2.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	8.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Rolling		% Recreational vehicles	4	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	8	/mi

Analysis direction volume, Vd	209	veh/h
Opposing direction volume, Vo	475	veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	2.2		1.8	
PCE for RVs, ER	1.1		1.1	
Heavy-vehicle adj. factor,(note-5) fHV	0.929		0.951	
Grade adj. factor,(note-1) fg	0.77		0.95	
Directional flow rate,(note-2) vi	318	pc/h	571	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	2.6	mi/h
Adj. for access point density,(note-3) fA	2.0	mi/h
Free-flow speed, FFSd	50.4	mi/h
Adjustment for no-passing zones, fnp	2.0	mi/h
Average travel speed, ATSd	41.5	mi/h
Percent Free Flow Speed, PFFS	82.3	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.7	1.2
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.960	0.988
Grade adjustment factor,(note-1) fg	0.81	0.96
Directional flow rate,(note-2) vi	292 pc/h	544 pc/h
Base percent time-spent-following,(note-4) BPTSFd	36.6 %	
Adjustment for no-passing zones, fnp	35.0	
Percent time-spent-following, PTSFd	48.8 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.19	
Peak 15-min vehicle-miles of travel, VMT15	454	veh-mi
Peak-hour vehicle-miles of travel, VMT60	1672	veh-mi
Peak 15-min total travel time, TT15	10.9	veh-h
Capacity from ATS, CdATS	1552	veh/h
Capacity from PTSF, CdPTSF	1613	veh/h
Directional Capacity	1552	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	8.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	41.5	mi/h
Percent time-spent-following, PTSFd (from above)	48.8	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	227.2
Effective width of outside lane, We	14.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.14
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	kda
Agency/Co.	
Date Performed	3/9/2020
Analysis Time Period	PM Peak
Highway	SR 49
From/To	Auburn to SR 193
Jurisdiction	Caltrans
Analysis Year	2040
Description	Cool Dollar General

Input Data

Highway class	Class 1		Peak hour factor, PHF	0.92	
Shoulder width	2.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	8.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Rolling		% Recreational vehicles	4	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	8	/mi

Analysis direction volume, Vd	425	veh/h
Opposing direction volume, Vo	735	veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.9		1.4	
PCE for RVs, ER	1.1		1.1	
Heavy-vehicle adj. factor,(note-5) fHV	0.945		0.973	
Grade adj. factor,(note-1) fg	0.93		0.99	
Directional flow rate,(note-2) vi	526	pc/h	829	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	2.6	mi/h
Adj. for access point density,(note-3) fA	2.0	mi/h
Free-flow speed, FFSd	50.4	mi/h
Adjustment for no-passing zones, fnp	1.3	mi/h
Average travel speed, ATSd	38.6	mi/h
Percent Free Flow Speed, PFFS	76.6	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.4	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.977	1.000
Grade adjustment factor,(note-1) fg	0.94	1.00
Directional flow rate,(note-2) vi	503 pc/h	799 pc/h
Base percent time-spent-following,(note-4) BPTSFd	55.1 %	
Adjustment for no-passing zones, fnp	27.9	
Percent time-spent-following, PTSFd	65.9 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.31	
Peak 15-min vehicle-miles of travel, VMT15	924	veh-mi
Peak-hour vehicle-miles of travel, VMT60	3400	veh-mi
Peak 15-min total travel time, TT15	23.9	veh-h
Capacity from ATS, CdATS	1638	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1638	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	8.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	38.6	mi/h
Percent time-spent-following, PTSFd (from above)	65.9	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	462.0
Effective width of outside lane, We	14.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.50
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	kda
Agency/Co.	
Date Performed	3/9/2020
Analysis Time Period	PM Peak
Highway	SR 49
From/To	Auburn to Sr 193
Jurisdiction	Caltrans
Analysis Year	2040
Description	Cool Dollar General

Input Data

Highway class	Class 1		Peak hour factor, PHF	0.92	
Shoulder width	2.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	8.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Rolling		% Recreational vehicles	4	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	8	/mi

Analysis direction volume, Vd	735	veh/h
Opposing direction volume, Vo	425	veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.4		1.9	
PCE for RVs, ER	1.1		1.1	
Heavy-vehicle adj. factor,(note-5) fHV	0.973		0.945	
Grade adj. factor,(note-1) fg	0.99		0.93	
Directional flow rate,(note-2) vi	829	pc/h	526	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	2.6	mi/h
Adj. for access point density,(note-3) fA	2.0	mi/h
Free-flow speed, FFSd	50.4	mi/h
Adjustment for no-passing zones, fnp	2.2	mi/h
Average travel speed, ATSd	37.7	mi/h
Percent Free Flow Speed, PFFS	74.8	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.4
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	0.977
Grade adjustment factor,(note-1) fg	1.00	0.94
Directional flow rate,(note-2) vi	799 pc/h	503 pc/h
Base percent time-spent-following,(note-4) BPTSFd	67.3 %	
Adjustment for no-passing zones, fnp	27.9	
Percent time-spent-following, PTSFd	84.4 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.49	
Peak 15-min vehicle-miles of travel, VMT15	1598	veh-mi
Peak-hour vehicle-miles of travel, VMT60	5880	veh-mi
Peak 15-min total travel time, TT15	42.4	veh-h
Capacity from ATS, CdATS	1536	veh/h
Capacity from PTSF, CdPTSF	1613	veh/h
Directional Capacity	1536	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	8.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	37.7	mi/h
Percent time-spent-following, PTSFd (from above)	84.4	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	798.9
Effective width of outside lane, We	14.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.77
Bicycle LOS	F

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	kda
Agency/Co.	
Date Performed	3/9/2020
Analysis Time Period	PM Peak
Highway	SR 49
From/To	SR 193 TO COLOMA
Jurisdiction	Caltrans
Analysis Year	2040
Description	Cool Dollar General

Input Data

Highway class	Class 1		Peak hour factor, PHF	0.92	
Shoulder width	2.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	8.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Specific Grade		% Recreational vehicles	4	%
Grade: Length	0.25	mi	% No-passing zones	100	%
Up/down	3.0	%	Access point density	8	/mi

Analysis direction volume, Vd	325	veh/h
Opposing direction volume, Vo	330	veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	2.2		1.3	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.930		0.982	
Grade adj. factor,(note-1) fg	0.89		1.00	
Directional flow rate,(note-2) vi	427	pc/h	365	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	2.6	mi/h
Adj. for access point density,(note-3) fA	2.0	mi/h
Free-flow speed, FFSd	50.4	mi/h
Adjustment for no-passing zones, fnp	2.9	mi/h
Average travel speed, ATSd	41.3	mi/h
Percent Free Flow Speed, PFFS	82.0	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	0.994
Grade adjustment factor,(note-1) fg	0.96	1.00
Directional flow rate,(note-2) vi	366 pc/h	361 pc/h
Base percent time-spent-following,(note-4) BPTSFd	38.9 %	
Adjustment for no-passing zones, fnp	50.2	
Percent time-spent-following, PTSFd	64.2 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.25	
Peak 15-min vehicle-miles of travel, VMT15	707	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2600	veh-mi
Peak 15-min total travel time, TT15	17.1	veh-h
Capacity from ATS, CdATS	1409	veh/h
Capacity from PTSF, CdPTSF	1639	veh/h
Directional Capacity	1409	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	8.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	41.3	mi/h
Percent time-spent-following, PTSFd (from above)	64.2	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	353.3
Effective width of outside lane, We	14.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.36
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	kda
Agency/Co.	
Date Performed	3/9/2020
Analysis Time Period	PM Peak
Highway	SR 49
From/To	SR 193 TO COLOMA
Jurisdiction	Caltrans
Analysis Year	2040
Description	Cool Dollar General

Input Data

Highway class	Class 1		Peak hour factor, PHF	0.92	
Shoulder width	2.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	8.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Specific Grade		% Recreational vehicles	4	%
Grade: Length	0.25	mi	% No-passing zones	100	%
Up/down	3.0	%	Access point density	8	/mi

Analysis direction volume, Vd	330	veh/h
Opposing direction volume, Vo	325	veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	2.2		1.3	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.931		0.982	
Grade adj. factor,(note-1) fg	0.89		1.00	
Directional flow rate,(note-2) vi	433	pc/h	360	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	2.6	mi/h
Adj. for access point density,(note-3) fA	2.0	mi/h
Free-flow speed, FFSd	50.4	mi/h
Adjustment for no-passing zones, fnp	3.0	mi/h
Average travel speed, ATSd	41.3	mi/h
Percent Free Flow Speed, PFFS	81.9	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	0.994
Grade adjustment factor,(note-1) fg	0.96	1.00
Directional flow rate,(note-2) vi	372 pc/h	355 pc/h
Base percent time-spent-following,(note-4) BPTSFd	39.6 %	
Adjustment for no-passing zones, fnp	50.2	
Percent time-spent-following, PTSFd	65.3 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.25	
Peak 15-min vehicle-miles of travel, VMT15	717	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2640	veh-mi
Peak 15-min total travel time, TT15	17.4	veh-h
Capacity from ATS, CdATS	1407	veh/h
Capacity from PTSF, CdPTSF	1640	veh/h
Directional Capacity	1407	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	8.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	41.3	mi/h
Percent time-spent-following, PTSFd (from above)	65.3	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	358.7
Effective width of outside lane, We	14.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.37
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	kda
Agency/Co.	
Date Performed	3/9/2020
Analysis Time Period	PM Peak
Highway	SR 193
From/To	SR 49 TO GEORGETOWN
Jurisdiction	Caltrans
Analysis Year	2040
Description	Cool Dollar General

Input Data

Highway class	Class 1		Peak hour factor, PHF	0.92	
Shoulder width	2.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	8.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Specific Grade		% Recreational vehicles	4	%
Grade: Length	0.25	mi	% No-passing zones	100	%
Up/down	3.0	%	Access point density	8	/mi

Analysis direction volume, Vd	530	veh/h
Opposing direction volume, Vo	240	veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.8		1.4	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.954		0.977	
Grade adj. factor,(note-1) fg	1.00		1.00	
Directional flow rate,(note-2) vi	604	pc/h	267	pc/h

Free-Flow Speed from Field Measurement:		
Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	2.6	mi/h
Adj. for access point density,(note-3) fA	2.0	mi/h
Free-flow speed, FFSd	50.4	mi/h
Adjustment for no-passing zones, fnp	3.6	mi/h
Average travel speed, ATSd	40.1	mi/h
Percent Free Flow Speed, PFFS	79.5	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	0.994
Grade adjustment factor,(note-1) fg	0.92	1.00
Directional flow rate,(note-2) vi	626 pc/h	262 pc/h
Base percent time-spent-following,(note-4) BPTSFd	53.2 %	
Adjustment for no-passing zones, fnp	34.2	
Percent time-spent-following, PTSFd	77.3 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.36	
Peak 15-min vehicle-miles of travel, VMT15	1152	veh-mi
Peak-hour vehicle-miles of travel, VMT60	4240	veh-mi
Peak 15-min total travel time, TT15	28.8	veh-h
Capacity from ATS, CdATS	1348	veh/h
Capacity from PTSF, CdPTSF	1662	veh/h
Directional Capacity	1348	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	8.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	40.1	mi/h
Percent time-spent-following, PTSFd (from above)	77.3	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	576.1
Effective width of outside lane, We	14.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.61
Bicycle LOS	F

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

HCS 2010: Two-Lane Highways Release 6.50

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	kda
Agency/Co.	
Date Performed	3/9/2020
Analysis Time Period	PM Peak
Highway	SR 193
From/To	SR 49 TO GEORGETOWN
Jurisdiction	Caltrans
Analysis Year	2040
Description	Cool Dollar General

Input Data

Highway class	Class 1		Peak hour factor, PHF	0.92	
Shoulder width	2.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	8.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Rolling		% Recreational vehicles	4	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	8	/mi

Analysis direction volume, Vd 240 veh/h
Opposing direction volume, Vo 530 veh/h

Average Travel Speed

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	2.2	1.7
PCE for RVs, ER	1.1	1.1
Heavy-vehicle adj. factor,(note-5) fHV	0.929	0.956
Grade adj. factor,(note-1) fg	0.80	0.97
Directional flow rate,(note-2) vi	351 pc/h	621 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	2.6	mi/h
Adj. for access point density,(note-3) fA	2.0	mi/h
Free-flow speed, FFSd	50.4	mi/h
Adjustment for no-passing zones, fnp	1.8	mi/h
Average travel speed, ATSd	41.0	mi/h
Percent Free Flow Speed, PFFS	81.4	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.7	1.2
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.960	0.988
Grade adjustment factor,(note-1) fg	0.83	0.97
Directional flow rate,(note-2) vi	328 pc/h	601 pc/h
Base percent time-spent-following,(note-4) BPTSFd	39.9 %	
Adjustment for no-passing zones, fnp	33.3	
Percent time-spent-following, PTSFd	51.7 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.21	
Peak 15-min vehicle-miles of travel, VMT15	522	veh-mi
Peak-hour vehicle-miles of travel, VMT60	1920	veh-mi
Peak 15-min total travel time, TT15	12.7	veh-h
Capacity from ATS, CdATS	1576	veh/h
Capacity from PTSF, CdPTSF	1649	veh/h
Directional Capacity	1576	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	8.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	41.0	mi/h
Percent time-spent-following, PTSFd (from above)	51.7	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	260.9
Effective width of outside lane, We	14.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.21
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	kda
Agency/Co.	
Date Performed	3/9/2020
Analysis Time Period	PM Peak
Highway	SR 49
From/To	Auburn to SR 193
Jurisdiction	Caltrans
Analysis Year	2040 PLUS DOLLAR GENERAL
Description	Cool Dollar General

Input Data

Highway class	Class 1		Peak hour factor, PHF	0.92	
Shoulder width	2.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	8.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Rolling		% Recreational vehicles	4	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	8	/mi

Analysis direction volume, Vd	427	veh/h
Opposing direction volume, Vo	737	veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.9		1.4	
PCE for RVs, ER	1.1		1.1	
Heavy-vehicle adj. factor,(note-5) fHV	0.945		0.973	
Grade adj. factor,(note-1) fg	0.93		0.99	
Directional flow rate,(note-2) vi	528	pc/h	832	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	2.6	mi/h
Adj. for access point density,(note-3) fA	2.0	mi/h
Free-flow speed, FFSd	50.4	mi/h
Adjustment for no-passing zones, fnp	1.3	mi/h
Average travel speed, ATSd	38.6	mi/h
Percent Free Flow Speed, PFFS	76.5	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.4	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	0.977	1.000
Grade adjustment factor,(note-1) fg	0.94	1.00
Directional flow rate,(note-2) vi	506 pc/h	801 pc/h
Base percent time-spent-following,(note-4) BPTSFd	55.3 %	
Adjustment for no-passing zones, fnp	27.8	
Percent time-spent-following, PTSFd	66.1 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.31	
Peak 15-min vehicle-miles of travel, VMT15	928	veh-mi
Peak-hour vehicle-miles of travel, VMT60	3416	veh-mi
Peak 15-min total travel time, TT15	24.1	veh-h
Capacity from ATS, CdATS	1638	veh/h
Capacity from PTSF, CdPTSF	1700	veh/h
Directional Capacity	1638	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	8.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	38.6	mi/h
Percent time-spent-following, PTSFd (from above)	66.1	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	464.1
Effective width of outside lane, We	14.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.50
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	kda
Agency/Co.	
Date Performed	3/9/2020
Analysis Time Period	PM Peak
Highway	SR 49
From/To	Auburn to Sr 193
Jurisdiction	Caltrans
Analysis Year	2040 PLUS DOLLAR GENERAL
Description	Cool Dollar General

Input Data

Highway class	Class 1		Peak hour factor, PHF	0.92	
Shoulder width	2.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	8.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Rolling		% Recreational vehicles	4	%
Grade: Length	-	mi	% No-passing zones	100	%
Up/down	-	%	Access point density	8	/mi

Analysis direction volume, Vd	737	veh/h
Opposing direction volume, Vo	427	veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.4		1.9	
PCE for RVs, ER	1.1		1.1	
Heavy-vehicle adj. factor,(note-5) fHV	0.973		0.945	
Grade adj. factor,(note-1) fg	0.99		0.93	
Directional flow rate,(note-2) vi	832	pc/h	528	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	2.6	mi/h
Adj. for access point density,(note-3) fA	2.0	mi/h
Free-flow speed, FFSd	50.4	mi/h
Adjustment for no-passing zones, fnp	2.2	mi/h
Average travel speed, ATSd	37.7	mi/h
Percent Free Flow Speed, PFFS	74.7	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.4
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	0.977
Grade adjustment factor,(note-1) fg	1.00	0.94
Directional flow rate,(note-2) vi	801 pc/h	506 pc/h
Base percent time-spent-following,(note-4) BPTSFd	67.1 %	
Adjustment for no-passing zones, fnp	27.8	
Percent time-spent-following, PTSFd	84.1 %	

Level of Service and Other Performance Measures

Level of service, LOS	E	
Volume to capacity ratio, v/c	0.49	
Peak 15-min vehicle-miles of travel, VMT15	1602	veh-mi
Peak-hour vehicle-miles of travel, VMT60	5896	veh-mi
Peak 15-min total travel time, TT15	42.5	veh-h
Capacity from ATS, CdATS	1536	veh/h
Capacity from PTSF, CdPTSF	1613	veh/h
Directional Capacity	1536	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	8.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	37.7	mi/h
Percent time-spent-following, PTSFd (from above)	84.1	
Level of service, LOSd (from above)	E	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	801.1
Effective width of outside lane, We	14.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.77
Bicycle LOS	F

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	kda
Agency/Co.	
Date Performed	3/9/2020
Analysis Time Period	PM Peak
Highway	SR 49
From/To	SR 193 TO COLOMA
Jurisdiction	Caltrans
Analysis Year	2040 PLUS DOLLAR GENERAL
Description	Cool Dollar General

Input Data

Highway class	Class 1		Peak hour factor, PHF	0.92	
Shoulder width	2.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	8.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Specific Grade		% Recreational vehicles	4	%
Grade: Length	0.25	mi	% No-passing zones	100	%
Up/down	3.0	%	Access point density	8	/mi

Analysis direction volume, Vd	334	veh/h
Opposing direction volume, Vo	338	veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	2.2		1.3	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.931		0.982	
Grade adj. factor,(note-1) fg	0.90		1.00	
Directional flow rate,(note-2) vi	433	pc/h	374	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	2.6	mi/h
Adj. for access point density,(note-3) fA	2.0	mi/h
Free-flow speed, FFSd	50.4	mi/h
Adjustment for no-passing zones, fnp	2.9	mi/h
Average travel speed, ATSd	41.3	mi/h
Percent Free Flow Speed, PFFS	81.9	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	0.994
Grade adjustment factor,(note-1) fg	0.96	1.00
Directional flow rate,(note-2) vi	377 pc/h	370 pc/h
Base percent time-spent-following,(note-4) BPTSFd	40.7 %	
Adjustment for no-passing zones, fnp	49.2	
Percent time-spent-following, PTSFd	65.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.25	
Peak 15-min vehicle-miles of travel, VMT15	726	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2672	veh-mi
Peak 15-min total travel time, TT15	17.6	veh-h
Capacity from ATS, CdATS	1424	veh/h
Capacity from PTSF, CdPTSF	1637	veh/h
Directional Capacity	1424	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	8.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	41.3	mi/h
Percent time-spent-following, PTSFd (from above)	65.5	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	363.0
Effective width of outside lane, We	14.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.37
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	kda
Agency/Co.	
Date Performed	3/9/2020
Analysis Time Period	PM Peak
Highway	SR 49
From/To	SR 193 TO COLOMA
Jurisdiction	Caltrans
Analysis Year	2040 PLUS DOLLAR GENERAL
Description	Cool Dollar General

Input Data

Highway class	Class 1		Peak hour factor, PHF	0.92	
Shoulder width	2.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	8.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Specific Grade		% Recreational vehicles	4	%
Grade: Length	0.25	mi	% No-passing zones	100	%
Up/down	3.0	%	Access point density	8	/mi

Analysis direction volume, Vd	338	veh/h
Opposing direction volume, Vo	334	veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	2.2		1.3	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adj. factor,(note-5) fHV	0.931		0.982	
Grade adj. factor,(note-1) fg	0.90		1.00	
Directional flow rate,(note-2) vi	438	pc/h	370	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	2.6	mi/h
Adj. for access point density,(note-3) fA	2.0	mi/h
Free-flow speed, FFSd	50.4	mi/h
Adjustment for no-passing zones, fnp	2.9	mi/h
Average travel speed, ATSd	41.2	mi/h
Percent Free Flow Speed, PFFS	81.8	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.1
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	0.994
Grade adjustment factor,(note-1) fg	0.96	1.00
Directional flow rate,(note-2) vi	381 pc/h	365 pc/h
Base percent time-spent-following,(note-4) BPTSFd	41.4 %	
Adjustment for no-passing zones, fnp	49.2	
Percent time-spent-following, PTSFd	66.5 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.26	
Peak 15-min vehicle-miles of travel, VMT15	735	veh-mi
Peak-hour vehicle-miles of travel, VMT60	2704	veh-mi
Peak 15-min total travel time, TT15	17.8	veh-h
Capacity from ATS, CdATS	1424	veh/h
Capacity from PTSF, CdPTSF	1638	veh/h
Directional Capacity	1424	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	8.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	41.2	mi/h
Percent time-spent-following, PTSFd (from above)	66.5	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	367.4
Effective width of outside lane, We	14.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.38
Bicycle LOS	E

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax:
E-Mail:

Directional Two-Lane Highway Segment Analysis

Analyst	kda
Agency/Co.	
Date Performed	3/9/2020
Analysis Time Period	PM Peak
Highway	SR 193
From/To	SR 49 TO GEORGETOWN
Jurisdiction	Caltrans
Analysis Year	2040 PLUS DOLLAR GENERAL
Description	Cool Dollar General

Input Data

Highway class	Class 1		Peak hour factor, PHF	0.92	
Shoulder width	2.0	ft	% Trucks and buses	6	%
Lane width	12.0	ft	% Trucks crawling	0.0	%
Segment length	8.0	mi	Truck crawl speed	0.0	mi/hr
Terrain type	Specific Grade		% Recreational vehicles	4	%
Grade: Length	0.25	mi	% No-passing zones	100	%
Up/down	-3.0	%	Access point density	8	/mi

Analysis direction volume, Vd	538	veh/h
Opposing direction volume, Vo	249	veh/h

Average Travel Speed

Direction	Analysis(d)		Opposing (o)	
PCE for trucks, ET	1.1		2.3	
PCE for RVs, ER	1.0		1.1	
Heavy-vehicle adj. factor,(note-5) fHV	0.994		0.923	
Grade adj. factor,(note-1) fg	1.00		0.86	
Directional flow rate,(note-2) vi	588	pc/h	341	pc/h

Free-Flow Speed from Field Measurement:

Field measured speed,(note-3) S FM	-	mi/h
Observed total demand,(note-3) V	-	veh/h

Estimated Free-Flow Speed:

Base free-flow speed,(note-3) BFFS	55.0	mi/h
Adj. for lane and shoulder width,(note-3) fLS	2.6	mi/h
Adj. for access point density,(note-3) fA	2.0	mi/h
Free-flow speed, FFSd	50.4	mi/h
Adjustment for no-passing zones, fnp	3.1	mi/h
Average travel speed, ATSd	40.1	mi/h
Percent Free Flow Speed, PFFS	79.6	%

Percent Time-Spent-Following

Direction	Analysis(d)	Opposing (o)
PCE for trucks, ET	1.0	1.0
PCE for RVs, ER	1.0	1.0
Heavy-vehicle adjustment factor, fHV	1.000	1.000
Grade adjustment factor,(note-1) fg	1.00	0.98
Directional flow rate,(note-2) vi	585 pc/h	277 pc/h
Base percent time-spent-following,(note-4) BPTSFd	52.4 %	
Adjustment for no-passing zones, fnp	35.1	
Percent time-spent-following, PTSFd	76.2 %	

Level of Service and Other Performance Measures

Level of service, LOS	D	
Volume to capacity ratio, v/c	0.35	
Peak 15-min vehicle-miles of travel, VMT15	1170	veh-mi
Peak-hour vehicle-miles of travel, VMT60	4304	veh-mi
Peak 15-min total travel time, TT15	29.2	veh-h
Capacity from ATS, CdATS	1660	veh/h
Capacity from PTSF, CdPTSF	1690	veh/h
Directional Capacity	1660	veh/h

Passing Lane Analysis

Total length of analysis segment, Lt	8.0	mi
Length of two-lane highway upstream of the passing lane, Lu	-	mi
Length of passing lane including tapers, Lpl	-	mi
Average travel speed, ATSd (from above)	40.1	mi/h
Percent time-spent-following, PTSFd (from above)	76.2	
Level of service, LOSd (from above)	D	

Average Travel Speed with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld	-	mi
Adj. factor for the effect of passing lane on average speed, fpl	-	
Average travel speed including passing lane, ATSpl	-	
Percent free flow speed including passing lane, PFFSpl	0.0	%

Percent Time-Spent-Following with Passing Lane

Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	-	mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	-	mi
Adj. factor for the effect of passing lane on percent time-spent-following, fpl	-	
Percent time-spent-following including passing lane, PTSFpl	-	%

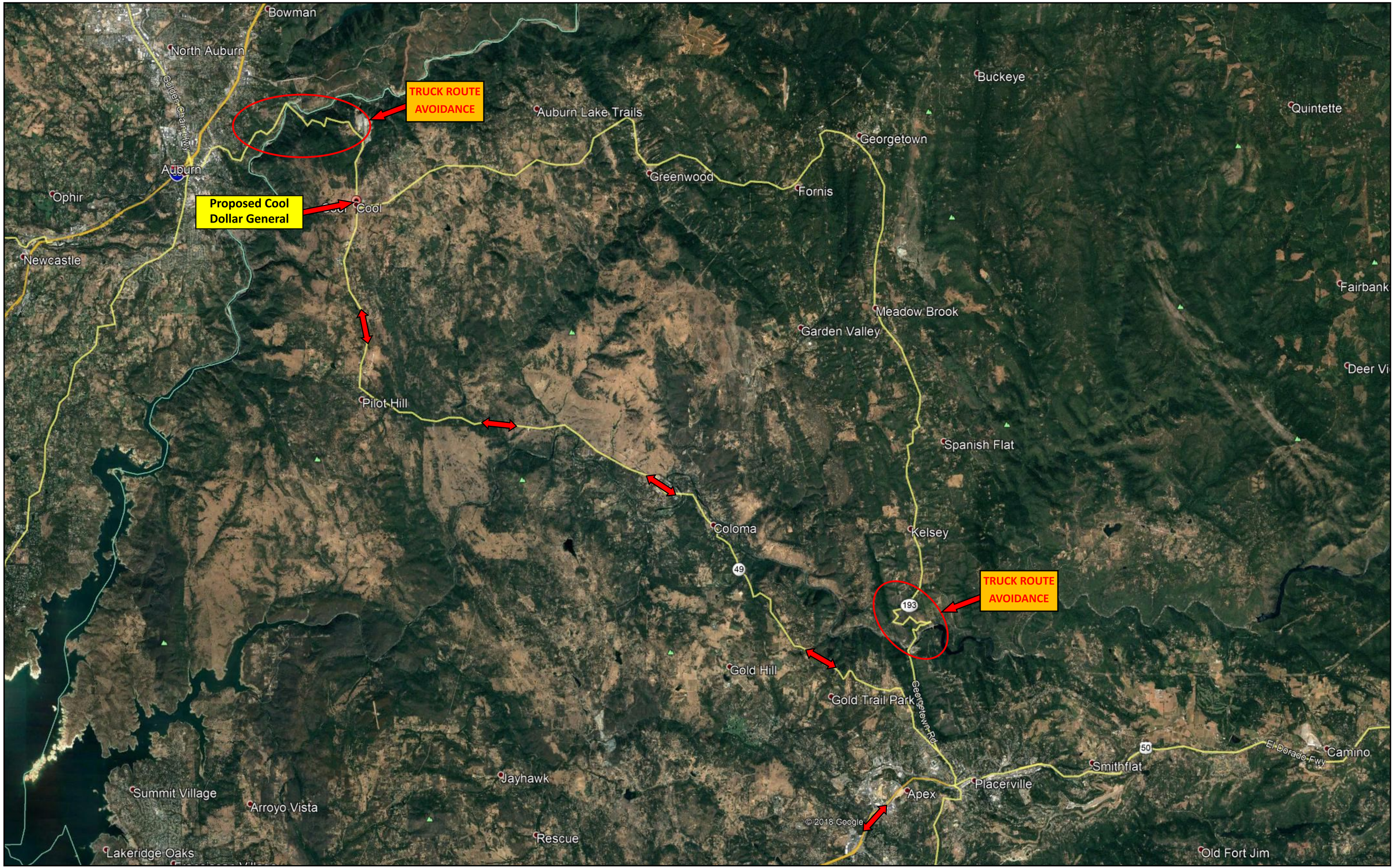
Level of Service and Other Performance Measures with Passing Lane

Level of service including passing lane, LOSpl	E	
Peak 15-min total travel time, TT15	-	veh-h

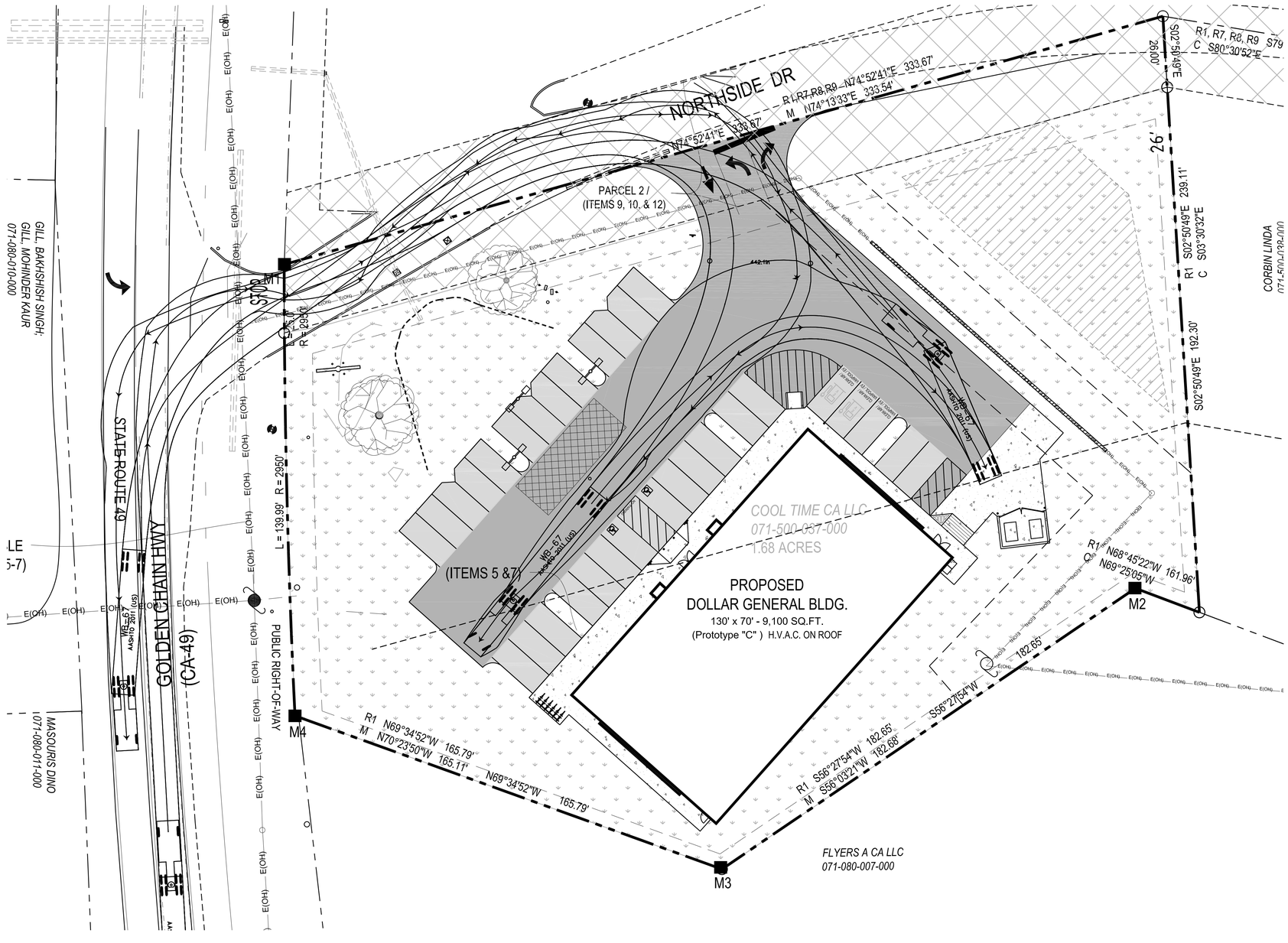
Bicycle Level of Service

Posted speed limit, Sp	55
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	584.8
Effective width of outside lane, We	14.00
Effective speed factor, St	4.79
Bicycle LOS Score, BLOS	5.62
Bicycle LOS	F

Notes:
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only.
5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.



Delivery Truck Route—Cool Dollar General



NORTH

SITE PLAN A

1"=20'-0"

0 10' 20' 30' 40' 50'

SCALE 1"=20'

FLOOD ZONE NOTE

FLOOD ZONE CLASSIFICATION IS BASED UPON THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) MAP PANEL NUMBER 06017C0175E ALL OF THE PARCEL ARE LOCATED WITHIN ZONE X - DESCRIBED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

EXCEPTIONS: per amended title report provided by First American Title Co. order no: 0901-5921611

(ITEM 1) AN EASEMENT FOR POLE LINES AND INCIDENTAL PURPOSES, RECORDED FEBRUARY 9, 1928 IN BOOK 208, PAGE 216 OF OFFICIAL RECORDS.
IN FAVOR OF: PACIFIC GAS AND ELECTRICAL COMPANY. AFFECTS: AS DESCRIBED THEREIN. THE LOCATIONS OF THE EASEMENT CANNOT BE DETERMINED FROM RECORD INFORMATION.

(ITEM 2) AN EASEMENT FOR POLE LINES AND INCIDENTAL PURPOSES, RECORDED JANUARY 9, 1942 IN BOOK 192, PAGE 84 OF OFFICIAL RECORDS. IN FAVOR OF: PACIFIC GAS AND ELECTRIC COMPANY. AFFECTS: AS DESCRIBED THEREIN. THE LOCATION OF THE EASEMENT CANNOT BE DETERMINED FROM RECORD INFORMATION.

(ITEM 3) AN EASEMENT FOR POLE LINES AND INCIDENTAL PURPOSES, RECORDED JUNE 8, 1953 IN BOOK 326, PAGE 158 OF OFFICIAL RECORDS. IN FAVOR OF: PACIFIC TELEPHONE AND TELEGRAPH COMPANY. AFFECTS: AS DESCRIBED THEREIN. THE LOCATION OF THE EASEMENT CANNOT BE DETERMINED FROM RECORD INFORMATION.

(ITEM 4) THE TERMS AND PROVISIONS CONTAINED IN THE DOCUMENT ENTITLED "AGREEMENT TO PAY ROAD IMPROVEMENT FEE" RECORDED JANUARY 5, 1982 IN BOOK 2044, PAGE 91 OF OFFICIAL RECORDS.

(ITEM 5) AN EASEMENT SHOWN OR DEDICATED ON THE MAP AS REFERRED TO IN THE LEGAL DESCRIPTION. FOR: 50' RADIUS TURNAROUND EASEMENT & NONEXCLUSIVE ROAD AND PUBLIC UTILITIES EASEMENT AND INCIDENTAL PURPOSES.

(ITEM 6) AN EASEMENT FOR ROAD AND PUBLIC UTILITIES AND INCIDENTAL PURPOSES, RECORDED JANUARY 27, 1982 IN BOOK 2049, PAGE 20 OF OFFICIAL RECORDS. IN FAVOR OF: NEWTON LEVESKIS AND BETTY LEVESKIS, HIS WIFE AS JOINT TENANTS. AFFECTS: NORTHERLY 25 FEET.(DEED FOR APN 071-500-044-000)

(ITEM 7) A LEASE DATED JANUARY 26, 1983, EXECUTED BY NEWTON G. LEVESKIS AND ELIZABETH J. LEVESKIS, HUSBAND AND WIFE AS LESSOR AND UNITED STATES POSTAL SERVICE AS LESSEE, RECORDED IN INSTRUMENT NO. 10172 IN BOOK 2155, PAGE 197 OF OFFICIAL RECORDS. DEFECTS, LIENS, ENCUMBRANCES OR OTHER MATTERS AFFECTING THE LEASEHOLD ESTATE, WHETHER OR NOT SHOWN BY THE PUBLIC RECORDS. (LEASE FOR APN 071-500-044-000)

(ITEM 8) AN EASEMENT FOR A 50' NONEXCLUSIVE ROAD AND PUBLIC UTILITIES AND INCIDENTAL PURPOSES, RECORDED MAY 29, 1992 AS INSTRUMENT NO. 33414 IN BOOK 3795, PAGE 385 OF OFFICIAL RECORDS. IN FAVOR OF: JOHN W. DELTON AND PATTY G. DALTON, HUSBAND AND WIFE, AS JOINT TENANT, AS TO AN UNDIVIDED 1/2 INTEREST AND DAVID E. HOPKINS AND MARY A. HOPKINS, HUSBAND AND WIFE, AS JOINT TENANTS, AS TO AN UNDIVED 1/2 INTEREST. AFFECTS: AS DESCRIBED THEREIN.

SURVEYORS NOTES

1.) UNDERGROUND UTILITIES EXIST AND WERE MEASURED CONFORMED WITH THE LOCATIONS ON THE AS-BUILT IMPROVEMENT PLANS. HOWEVER EXACT LOCATIONS ARE NOT KNOWN AND CAN ONLY BE DETERMINED BY CAREFULLY EXCAVATING AND HAND PROBING. ASSISTANCE CAN BE OBTAINED BY CALLING UNDERGROUND SERVICE ALERT (USA) AT 1-800-227-2600. 48 HOURS IN ADVANCE OF ANY EXCAVATION.

2.) THE PROPERTY IS NOW BEING USED FOR LAND DEVELOPMENT.

3.) THERE IS NO OBSERVABLE EVIDENCE THAT THE PROPERTY WAS USED AS A SOLID WASTE DUMP, SUMP OR SANITARY LAND FILL.

3) THERE ARE SEVERAL TREES ALONG THE ON PROPERTY AND THE TREES LARGER THAN 12-INCH DIAMETER HAVE BEEN NOTED.

SITE LEGEND

	HEAVY DUTY CONCRETE		STAND. DUTY ASPHALT
	HEAVY DUTY ASPHALT		LANDSCAPE/OPEN AREA
■	FOUND MONUMENT AS DESCRIBED	— —	(E) SEWER SERVICE
●	FOUND 5/8" REBAR WITH CAP STAMPED LS 5161	— - —	(E) WATER SERVICE
○	CALCULATED POINT,NOTHING FOUND OR SET		(E) FIRE HYDRANT
▲	FOUND STANDARD MONUMENT IN WELL		(E) STREET LIGHT
(E)	EXISTING		(E) FENCE
( )	EMBRACES RECORD DATA		(E) TREE - APPROX DRIP LINE W/TRUNK DIAMETER
M	REPRESENTS MEASURED DATA		(E) POWER POLE/ UTILITY POLE
C	REPRESENTS CALCULATED DATA	S.N.F.	SEARCH NOT FOUND
P.S.E.	(PUBLIC SERVICE EASEMENT)	EDOR	EL DORADO COUNTY OFFICIAL RECORDS
ROS	RECORD OF SURVEY	(T)	TOTAL
R/W	RIGHT-OF-WAY		

MPA ARCHITECTS INC.
3578 30th Street
San Diego, CA 92104
V. 619.236.0595
F. 619.236.0557
www.mpa-architects.com
MEMBER
AMERICAN INSTITUTE OF ARCHITECTS

CLIENT

WOODCREST
1410 MAIN STREET, SUITE C
RAMONA, CALIFORNIA 92065
CONTACT: WADE WYLIE
P: 760-789-5493
e-mail: wade@woodcrestrev.com

PROJECT

A PROPOSED COMMERCIAL DEVELOPMENT FOR:
DOLLAR GENERAL®
SEC STATE HWY 49 & NORTHSIDE DR
COOL, CA 95614

REVISIONS

NO.	DESCRIPTION	DATE

LICENSED ARCHITECT
JOHN RUMSEY
C26819
Exp. 3-31-2021
STATE OF CALIFORNIA

SHEET TITLE
ARCHITECTURAL SITE PLAN

DATE:	05-21-20	SCALE:	AS NOTED
DRAWN BY:	L. DALE	DATABASE:	19091
CHECKED BY:	*	SHEET NUMBER:	AS1.1
PROJECT NO:	19091		

Copyright 2020 MPA Architects, Inc. All rights reserved.

Appendix J

Cool Dollar General Economic Analysis

WOODCREST REAL ESTATE VENTURES
A Division of Woodcrest Homes, Inc.

May 22, 2019

Mr. Rommel Pabalinas, Planning Manager
El Dorado County Planning & Building Dept.
2850 Fairlane Court, Bldg. C
Placerville, CA 95667

PROJECT NAME: Cool General Retail
PROJECT OWNER: Hix Snedeker Cool, LLC
APPLICANT: Woodcrest Real Estate Ventures, Steve Powell
PROJECT ADDRESS: 1020 Northside Drive, Cool, CA 95614
APNS: 071-500-037-000
PROJECT CONTACT: Steve Powell, 760-271-9400 (cell) and 760-789-5493 (office)

Dear Mr. Pabalinas,

Attached for the Planning Commission's consideration is a copy of an economic analysis of the proposed Dollar General store in Cool, prepared by ALH Urban & Regional Economics. The analysis considers the potential economic impact and market demand that the proposed store will serve. The likely market area estimated in the study for the Dollar General store (similar to the market area served by existing businesses in Cool) includes the four adjacent zip codes that encompass the communities of Cool, Pilot Hill, Lotus, and Greenwood.

The economic study provides additional evidence to support the conclusions in the environmental review that the proposed project would not result in significant new traffic impacts. At the same time, the presence of Dollar General could support and help to increase the amount of economic activity that stays in the Cool market area. Notably, the economic study explains that:

> *there is very little existing competition in or just beyond the market area to obtain some basic household necessities other than food and some sundry items. Therefore, in many of the categories listed, Dollar General will bring a mix of retail merchandise to the store's market area that is not already present. This will enable market area residents to reduce their travel time and the associated transportation costs (both personal and environmental) to obtain basic household necessities…. Because of the relative lack of shopping opportunities in Cool, market area consumers are leaving the area to make purchases for goods not available in Cool and the general environs. At these times, consumers are also probably taking advantage of more cost effective grocery shopping opportunities available in these more heavily retailed areas. The presence of Dollar General will therefore help reduce the need for some of these out of community shopping trips, thus retaining more consumer dollars within the market area, which could ultimately increase the sales captured by a range of Cool retailers and restaurants.* (ALH Economic Study, p. 10.)

We hope that you find the economic study helpful and informative in considering the proposed project.

Sincerely,

Steve Powell
President
Woodcrest Real Estate Ventures

ALH | ECON
ALH Urban & Regional Economics

2239 Oregon Street
Berkeley, CA 94705
510.704.1599
aherman@alhecon.com

November 26, 2019

Mr. Steve Powell, President
Woodcrest Companies
1410 Main Street, Suite C
Ramona, CA 92065

Re: Dollar General Economic Analysis in Cool, Unincorporated El Dorado County, California

Dear Mr. Powell:

ALH Urban & Regional Economics (ALH Economics) has prepared a brief economic analysis of the proposed Dollar General store in Cool, California, an unincorporated community in El Dorado County. The purpose of the analysis is to demonstrate the degree of potential market support for the store and an assessment of the potential for the store to coexist with existing retailers already nearby. To accomplish this analysis, ALH Economics engaged in the following tasks:

- Obtained information about the planned Dollar General store
- Reviewed Dollar General documents regarding store sales, operations, and typical market draw
- Visited the prospective store site and surrounding retail establishments
- Estimated the likely market area for Dollar General store draw
- Estimated market area retail demand
- Analyzed anticipated Dollar General sales in the context of market area demand
- Assessed the implications of Dollar General's operations at the proposed store site

A summary of the task findings follows. These findings are subject to the assumptions and general limiting conditions included at the end of the report. Select tables are included in the text, with exhibits presented in Appendix A. For general information purposes a description of ALH Economics and resume of the firm Principal, Amy L. Herman, is included in the Appendix B.

PROPOSED DOLLAR GENERAL STORE AND ENVIRONS

Dollar General is seeking to open a Dollar General store on a 1.69-acre site in Unincorporated El Dorado County, in Cool, California. The store is anticipated to total 9,100 square feet, of which approximately 7,259 square feet will comprise sales floor area. The balance of the space will comprise a range of uses, such as office, break room, restrooms, restroom corridor, storage area, etc. Typically, there will be 3 employees during a normal shift, with the expectation of 4-5 customers at a time during peak hours. Store hours are Monday through Sunday, 8 am to 10 pm.

The proposed Dollar General site is located at 1020 Northside Drive. The project site fronts on the east side of CA Highway 49 and the south side of Northside Drive, north of Highway 193. This location is near several clusters of existing commercial uses. One cluster comprises the Northside Center, which is across Northside Drive from the site and includes a small shopping center with a U.S. Post Office, a Chinese restaurant, and personal services, including Cool Nails & Salon, Cool Massage Therapy, and The Healing Shala. Cool Boat RV & Self Storage is further up Northside Drive from this center. The proposed Dollar General site is across CA Highway 49 from another commercial cluster, which includes several smaller strip centers or stand alone buildings with a mix of uses, including American River Pizza & Grill, JB's Outdoor Life (sporting goods), Cool Care Children's Center (childcare/preschool), Cool Animal Hospital, Cool Learning Center with before and after school programs, Cool Consultations (medical cannabis clinic), Timberline Realty, Cool General Store, Milestone Saloon, Los Establos Mexican Restaurant, Cool Florist & Gifts, Cher's Hair, Cool Feed & Ranch Supply, 76 Gas Station and convenience store, Cool Smoke Shop, Cool Bunz N' Beanz (pastries, sandwiches, burritos, coffee), Family Dentistry, JC Fit Personal Training, and The Garage – Automotive Service & Repair. This cluster also includes a couple of small retail vacancies.

Highway 193 intersects CA Highway 49 not far past the proposed Dollar General site. This road leads to Georgetown, about 12 miles to the east. The Cool Village Shopping Center is located at this intersection of CA Highway 49 and Highway 193. This shopping center is anchored by Holiday Market, a regional chain supermarket. Other center tenants include Cool Optometry, Mather Land Surveying, Iron Works Fitness, Cool Village Pharmacy, Subway, and Cool Beerwerks. Cool Physical Therapy and a vacant space comprise a separate building and Wells Fargo Bank also comprises a separate building. Some additional on-site construction is in progress at the center, but the nature of the construction is indeterminate. There is also a church on Highway 153 near the Cool Village Shopping Center.

There are several other commercial structures in the Cool environs, but the above overview generally describes the bulk of the commercial enterprises in the core portion of Cool, clustered at the intersection of CA Highway 49 and Highway 153.

DOLLAR GENERAL STORE OPERATIONS INFORMATION

Dollar General is a discount general merchandise retailer offering a broad selection of merchandise, including consumables, seasonal, home products, and apparel. The store merchandise includes high quality national brands from leading manufacturers as well as comparable quality private brand selections with prices at substantial discounts to national brands, including a Dollar General brand. The store's product offerings include most necessities, such as basic packaged and refrigerated food and dairy products, cleaning supplies, paper products, health and beauty care items, basic apparel, housewares, hardware and automotive supplies, among others. Across all Dollar General stores the average selling space is about 7,400 square feet. Through its broad merchandise offerings, Dollar General seeks to enable customers to fulfill their routine shopping requirements.[1]

[1] See Dollar General Corp, Form 10-K, For the fiscal year ended February 1, 2019, pages 5 and 6 for most of the information in this paragraph.

Dollar General differentiates itself from other retailers by offering low prices in a small-store format. Dollar General locates its stores in a variety of rural, suburban, and urban communities, with approximately 75% serving towns of 20,000 or fewer people.[2]

As of February 2019, average annual net store sales totaled $231 per square foot throughout the U.S. This figure generally comprised modest increases over prior year figures, which were $227 in 2018, $229 in 2017, $226 in 2016, and $223 in 2015.[3] These net sales figures were calculated by Dollar General based on average selling square footage of Dollar General stores. Assuming a modest increase in sales through 2019 similar to past year increases, this results in a beginning year 2020 store sales estimate of $233 per square foot. As average figures, these sales estimates most directly pertain to mature stores that have achieved stabilized sales. Typically, stores achieve stabilization over time, such as up to three years.

While the $233 per square foot figure pertains to mature stores, this analysis conservatively assumes that the Cool Dollar General store will perform consistent with the retailer's national average. This results in a stabilized annual store sales estimate of $1,691,451 in 2020 dollars (i.e., 7,259 square feet of sales area x $233 per square foot), which rounds to $1.7 million. As noted, this is a figure that typically pertains to mature, or stabilized, stores, not new stores during the initial ramp up period. As such, initial year sales at the proposed Cool store are likely to be lower than this $1.7 million estimate, but the analysis is conservatively benchmarked to a stabilized estimate of sales.

As noted above, Dollar General categorizes store sales into four major merchandising categories – consumables, seasonal, home products, and apparel. The percentage of store sales occurring across these categories, and the type of merchandise represented, is summarized in Table 1.

Table 1. Dollar General Merchandise Categories

Category	Percent of Sales	Type of Merchandise
Consumables	77.5%	Paper and cleaning products, packaged food, perishables, snacks, health and beauty, pet, and tobacco products
Seasonal	11.9%	Decorations, toys, batteries, small electronics, greeting cards, stationery, prepaid phones and accessories, gardening supplies, hardware, automotive, and home office supplies
Home Products	5.9%	Kitchen supplies, cookware, small appliances, light bulbs, storage containers, frames, candles, craft supplies, and kitchen, bed, and bath soft goods
Apparel	4.7%	Casual everyday apparel for infants, toddlers, girls, boys, women and men, including socks, underwear, disposable diapers, shoes, and accessories

Source: Dollar General Corp., Form 10-K, For the fiscal year ended February 1, 2019, p 6.

[2] Ibid, page 6.
[3] Ibid, page 23.

Based upon these store sales categories, and the $1.7 million Cool store sales estimate, the Cool Dollar General store sales would be distributed by category as presented in Table 2. This information indicates that approximately $1.3 million in store sales is estimated to comprise consumables, including food as well as non-food items. With respect to food items, based upon field visits to Dollar General stores in several California locations, these consumables do not include fresh produce such as fruits and vegetables. In addition, Dollar General carries a limited array of meats and cheeses, not including typical butcher or seafood counter food items. Further, while Dollar General sells beer and wine, these options are very limited, and the store does not sell other types of alcohol products such as hard liquor. Dollar General also does not sell the type of prepared food items typically found in a deli or hot food counter in a grocery store or some convenience markets.

Table 2. Estimated Distribution of Cool Dollar General Sales

Category	Percent of Sales	Sales
Consumables	77.5%	$1,310,875
Seasonal	11.9%	$201,283
Home Products	5.9%	$99,796
Apparel	4.7%	$79,498
	100.0%	$1,691,451

Sources: Table 1; and ALH Urban & Regional Economics.

Thus, while Dollar General sells many food items, the options are limited, requiring consumers seeking a wider range of products to shop elsewhere.

MARKET AREA DEFINITION AND DEMOGRAPHIC CHARACTERISTICS

As noted earlier, Dollar General tends to locate stores in a variety of rural, suburban, and urban communities, with approximately 75% serving communities with populations of 20,000 or fewer. The Cool site area meets the definition of this type of community, as demonstrated below.

The proposed Cool Dollar General site is located 6.5 miles from the nearest shopping node in Auburn and 19 miles from the next nearest competitive node in Placerville. These are the nearest cities with substantial retail bases. The drive time from the site to the nearest shopping nodes in Auburn and Placerville are 16 and 29 minutes, respectively. In 2017, taxable retail sales in Auburn totaled $601 million. This compared to $387 million in Placerville. Since Cool is an unincorporated area, the State of California does not routinely report taxable retail sales for the community, but taxable retail sales in all of El Dorado County's unincorporated areas in 2017 totaled $1.1 billion. Taxable retail sales in the County's unincorporated areas comprised 46% of all taxable retail sales. Cool is just one of many unincorporated communities in El Dorado County with an existing retail sales base, with other communities including Georgetown, El Dorado Hills, Cameron Park, and Shingle Springs. Thus, many communities contribute to the taxable retail sales reported for the entirety of the County's unincorporated areas.

There are many ways a market area can be defined. This can include by city/cities, Zip Code, census block group or other census geographic designation, radius from a geographic site, or drive-time from a geographic site. For the purpose of this study, ALH Economics defined a market area for the proposed Dollar General store based on a geography served by four zip codes. This includes the zip code that encompasses Cool (95664) as well as the adjoining zip codes for the communities of Pilot Hill (95664), Lotus (95651) and Greenwood (95635). These El Dorado County communities are all comparatively closer to Cool versus Georgetown or Placerville, and thus their residents are deemed more likely to make convenience purchases in Cool than elsewhere. Alternative market area definition methods were examined, including drive-time, distance radius, and census tract aggregation. However, some methods captured too large an area (distance radius and census tract aggregation) or too small an area (drive-time radius). Hence the zip code method of market area definition seemed most apt for the purpose of this analysis.

ALH Economics obtained demographic estimates for the population base within the aggregated zip code area from Environics Analytics, which is a leader in the United States in providing demographic and economic data, including modeled data. Per Environics Analytics, in 2020 there will be an estimated 7,432 people and 3,054 households within the 4-Zip Code market area. The median household income for these households is about $97,200, with an average of about $115,600. Environics Analytics further projects that El Dorado County's 2020 population will total 191,790. Thus, the Dollar General store's 4-Zip Code market area population comprises a very small portion of the County's population base.

MARKET AREA RETAIL DEMAND

ALH Economics maintains a retail demand model that estimates household spending on retail. The model is based upon analysis of taxable statewide retail sales combined with an estimate of household spending on retail by income. The model assumes that households in a market area will make retail expenditures comparable to the pattern of retail sales in the State of California. Exhibit 1 in Appendix A presents the results of this analysis. This exhibit indicates that among the nine major retail categories tracked by the State of California Board of Equalization, household spending in 2018 was anticipated to be greatest for Food & Beverage sales at 17.2% of all retail spending and lowest for Home Furnishings & Appliances at 5.4% of all retail spending.

Pursuant to data published by the U.S. Bureau of Labor Statistics, 2017 Consumer Expenditure Survey, households in the income group with annual household incomes between $15,000 to $29,999 and $200,000 and more throughout the United States spent an average of 60% to 17% of household income, respectively, on the type of retail goods tracked by the State of California Department of Tax and Fee Administration (formerly the Board of Equalization). The income bracket that best matches the proposed Cool Dollar General store market area demographics is the $100,000 to $149,999 bracket, where the average household income is $120,288 and the percent of income spent on retail is 27%. Because the average market area household income is lower than the average within the bracket, and the percent of income spent on retail increases as income declines as shown in Exhibit 2, ALH Economics estimates that the market area households will spend on average 28% of income on retail goods pursuant to interpolation of the data findings.

Market area household retail and restaurant demand was estimated based upon this 28% share of income spent on retail and the estimated distribution of retail spending pursuant to Exhibit 1. The

results are presented in Table 3, which indicates total market area retail demand potential of $98.9 million for the 4-Zip code market area. Not all this demand is in categories representative of Dollar General sales. The categories not reflected by Dollar General sales most notably include Motor Vehicles & Parts Dealers, Gasoline Stations, and Food Services & Drinking Places (e.g., restaurants and bars). While there is some overlap with Motor Vehicle Parts, the majority of this category is most likely measuring demand for automobile sales.

Table 3. Estimated Cool Proposed Dollar General
Market Area Demand for Retail Goods and Restaurants (1)

Retail Category	Distribution of Demand	Market Area Demand Per HH	Market Area Demand Total
Food & Beverage Stores	17.2%	$5,579	$17,038,216
General Merchandise Stores	11.8%	$3,824	$11,679,245
Motor Vehicle & Parts Dealers	15.6%	$5,055	$15,438,343
Food Services & Drinking Places	14.8%	$4,786	$14,616,789
Gasoline Stations	8.5%	$2,757	$8,419,073
Other Retail Group	12.7%	$4,108	$12,545,728
Clothing & Clothing Accessories	7.2%	$2,337	$7,136,078
Building Materials & Garden Equipment	6.7%	$2,180	$6,656,507
Home Furnishings & Appliances	5.4%	$1,755	$5,361,195
Retail Spending	100.0%	$32,381	$98,891,173

Source: ALH Urban & Regional Economics.
(1) The market area comprises a four zip code area encompassing Cool and nearby El Dorado County communities, including Pilot Hill, Lotus, and Greenwood.

Excluding the three categories of Motor Vehicles & Parts dealers, Gasoline Stations, and Food Services & Drinking Places results in a 4-Zip Code market area retail demand estimate of $60.4 million for goods inclusive of the type of merchandise sold by Dollar General. Of note, the Other Retail Group category presented in Table 3 includes drug stores, health and personal care, gifts, art goods and novelties, sporting goods, florists, photographic equipment and supplies, musical instruments, stationery and books, office and school supplies, second-hand merchandise, and miscellaneous other retail stores. Many of these types of goods are sold at Dollar General, although not all of them.

Notably, the 4-Zip code market area comprises a primary market area for retailers and restaurants in Cool. However, additional demand is likely to be generated from beyond this area as well, as other area households traverse through the area on their way to or from their home or work locations. In addition, Cool is in an area of the state that attracts tourists and people vacationing nearby. All of these non-market area residents provide additional sources of actual or potential demand for Cool's retail offerings.

EXISTING COMPETITIVE STORES AND RETAIL SALES

Because it is in a small unincorporated area, reliable estimates of the retail sales achieved by retail outlets in the Cool market area are not available. The only available government-generated store-related data are from the U.S. Census Bureau, Zip Code Business Patterns for the Cool zip code of 95614, which includes information on retail outlets by type and size that include paid employees,

excluding government. Thus, owner-operated businesses with no employees are not included. The most recent data available are from 2016. This information includes only 7 retail outlet listings, with the largest comprising a "Supermarket" with 20-49 employees. This most certainly is the Holiday Market, located at the Cool Village Shopping Center. Three other retail outlets were noted as having 5-9 employees. These include outlets classified as "Nursery, Garden Center, and Farm Supply Stores," "Convenience Stores," and "Gasoline Stations with Convenience Stores." In all likelihood, these are the Cool Feed & Ranch Supply, Cool General Store, and 76 Gas Station, respectively. Finally, three outlets are noted as having 1-4 employees. These are classified as "Floor Covering Stores," "Cosmetics, Beauty Supplies, and Perfume," and "Tobacco Stores." ALH Economics is unsure what store might be classified as Floor Covering Store, unless it could be a store no longer present in the market since the Zip Code Business Patterns data are dated, from 2016, or it could be a business located outside the core area in Cool, but the other two stores likely refer to the Cool Village Pharmacy and the Cool Smoke Shop. While these data are of limited use, and do not shed any light on store sales, their levels of employment provide insight into the relative sizes of their enterprises, which indicate that the Holiday Market is the largest retail business in Cool and that the overall retail sector has relatively small employment base.

ALH Economics believes there are several stores in Cool that are likely to be somewhat competitive with Dollar General because of their sale of overlapping sales merchandise. These stores and some of the representative products they sell that overlap with Dollar General are presented in Table 4, below.

Table 4. Cool Stores With Merchandise Overlapping with Dollar General

Retail Store	Representative Overlapping Merchandise	Representative Unique Merchandise
Cool Smoke Shop	Bottled drinks, snacks (candy, chips, nuts), batteries, t-shirts, socks, cigarettes	Smoking, tobacco, and vaping supplies
76 Gas Station Convenience Store	Bottled drinks, beer, snacks, candy, motor oil, t-shirts	Ancillary to gas purchases; prepared hot food and sandwiches
Cool Feed & Ranch Supply	Pet food and treats, cat litter, other pet supplies	Specialty pet items, no overlapping brands
Cool Village Pharmacy	Vitamins, first aid supplies, candles, gift cards	Pharmaceuticals (prescription and over the counter), more specialized vitamins, gifts
Cool General Store	Bottled drinks, dairy products, canned goods, cleaning supplies, paper products, BBQ supplies, cereal, snacks, storage bags, first aid supplies	Liquor, more varied beer and wine options
Holiday Market	Frozen foods, dairy products, cereal, canned goods, laundry detergent, snacks, cookies, paper products, storage bags	Full-service grocery store items, including fresh produce and vegetables, deli items, meat, seafood

Source: ALH Urban & Regional Economics.

While they sell some overlapping merchandise with Dollar General, all of the stores listed in Table 4 have a primary merchandise focus that is unique from Dollar General. As a result, this will serve to minimize their potential competitiveness with Dollar General, despite the partial overlap in

merchandising. For some stores the merchandise overlap is minimal, while for other stores the overlap is greater. For example, Dollar General sells cat and dog food, treats, toys, supplies, and cat litter. Cool Feed & Ranch Supply also sells these products. However, Cool Feed & Ranch Supply sells premium brand food and treat products compared to the brands sold by Dollar General, such that there is no overlap in specific consumable product availability. Therefore, it is very unlikely that a Cool Feed & Ranch Supply customer would shop at Dollar General for these consumable products unless by necessity, given the former store's more limited hours of operation (close 6 pm M-F, 5 pm Sat., closed on Sun.). In similar fashion, a store like the Cool Smoke Shop would be unlikely to be highly competitive with Dollar General because its primary focus is to sell smoking supplies, including tobacco and vaping supplies, none of which are available at Dollar General, thus a customer at Cool Smoke Shop would be most likely to purchase the overlapping products as a matter of convenience when at Cool Smoke Shop, ancillary to the primary purpose of their shopping trip. ALH Economics believes the same is the case with purchases at the 76 Gas Station Convenience Store, as the primary reason shoppers are at this store is to purchase gasoline, so purchases at the Convenience store would in almost all likelihood occur at the same time as their gasoline purchase. As with the preceding stores, Cool Village Pharmacy also has a core focus unique from Dollar General, which is pharmaceuticals, especially prescription pharmaceuticals. In conclusion, while these four stores sell some goods common to Dollar General, their relatively low level of competitiveness with Dollar General is unlikely to result in a sales impact that would significantly impair store performance or profitability.

The two other stores included in Table 4 have a greater number of products for sale that overlap with Dollar General. These stores are the Cool General Store and Holiday Market. Yet, while these stores have a considerable amount of overlapping merchandise with Dollar General, like the preceding four stores they also have unique merchandising orientations relative to Dollar General. These include the Cool General Store, being one of only two purveyors of bottled hard liquor in Cool, with the area's widest variety of hard liquor as well as varied wine and beer options, and the Holiday Market, being a full-service grocery store comprising the only source of fresh fruits, vegetables, meat, seafood, and bakery products in the immediate area of Cool, plus many specialized food products, including gluten free. Nonetheless, these two stores are likely to be most competitive with Dollar General because a high percentage of the products sold at Dollar General (but most certainly not all) can also be found at these stores.

ALH Economics estimates the size of the Cool General Store, based on Google mapping software, to be 1,800 to 2,100 square feet. Valid sales performance figures for this store are not publicly available, so for the sake of analysis ALH Economics assumes a generic sales performance estimate of $400 per square foot.[4] This is a generalized figure based on sales per square foot performance for regional, small town/low density grocery store chains reported by Retail Maxim, an industry resource on retail store productivity. This is a proxy selected, in some part, because of its relevancy also to the other competitive store, the Holiday Market, although this store functions much like a liquor store given its unique product mix emphasizing hard liquor, wine, and beer. Pursuant to this sales estimate, and a size in the middle of the range of 1,950 square feet, ALH Economics estimates that Cool General Store annual sales total $780,000. Based upon the preceding retail demand categories in

[4] Figures reported by Hoovers.com and Buzzfile.com for this store include annual revenues of $90,000 and $93,200 (rounded), which ALH Economics believes are quite low, and thus are rejected as most likely invalid.

Table 3, the Cool General Store sales would reflect Food & Beverage store sales, although the store sells other merchandise that crosses into other retail categories, such as auto supplies (Motor Vehicle Parts), first aid (Other Retail), and work gloves (Clothing). Even comparing all of this $780,000 sales estimate to the market area $17.0 million demand in the Food & Beverage stores category indicates that significant additional market area demand remains for other Food & Beverage store sales, especially when one considers that the market area demand in Table 3 comprises only Cool's primary market area demand, and that additional demand originates seasonally from persons living outside the market area as well as tourism and people vacationing in the area.

ALH Economics estimates the size of the Holiday Market based on mapping software and other visual techniques, to be 25,000 square feet. As with the Cool General Store, sales performance for this store is not publicly available, so the same $400 per square foot generic sales performance rate is assumed, resulting in a $10.0 million annual store sales estimate. This figure comprises a large portion of the $17.1 million of Food & Beverage demand estimated in Table 3. Yet, even with the addition of the Cool General Store sales, yet additional demand remains, indicating that Food & Beverage sales are leaking out of the Cool market area. These sales are likely leaking to the nearby communities of Auburn and Placerville, that have much more ample retail sectors.

In addition to the Cool market area's Food & Beverage demand that is not being adequately served by the Cool General Store and Holiday Market, it is highly likely that most of the market area's retail demand for other goods comprises leakage to other communities, since there are few shopping opportunities available in the Cool market area. This includes none to very little shopping opportunities available to meet market area shopping needs in other key retail categories such as general merchandise, clothing, home furnishings and appliances, and a range of other retail goods, such as sporting goods, and office supplies.

DOLLAR GENERAL RETAIL DEMAND CAPTURE RATE

Based upon its $1.7 million store sales estimate, the proposed Cool Dollar General store will need to capture only a small portion of market area demand to achieve stabilized sales consistent with national Dollar General store performance standards. Across all categories of market area demand, this would be 1.7% of the $98.9 million in the 4-Zip Code market area demand. However, demand for Dollar General merchandise will not originate from all categories of market area demand. Therefore, this capture rate increases to an overall 2.8% of the $60.4 million 4-Zip Code market area demand for all retail excluding demand for Motor Vehicles, Gasoline, and Food Services & Drinking Places (e.g., restaurants). These figures are presented in Table 5, which also estimates potential market area capture rates in the specific demand categories most likely to correspond with Dollar General's store sales.

Table 5. Dollar General Cool Market Area Demand Capture Rate Analysis

Retail Category	Dollar General Sales (1)	Market Area Demand	Dollar General Capture Rate
Food & Beverage Stores	$393,262 (2)	$17,038,216	2.3%
General Merchandise Stores	$917,612 (2)	$11,679,245	7.9%
Motor Vehicle & Parts Dealers	$0 (3)	$15,438,343	0.0%
Food Services & Drinking Places	$0	$14,616,789	0.0%
Gasoline Stations	$0	$8,419,073	0.0%
Other Retail Group	$201,283 (4)	$12,545,728	1.6%
Clothing & Clothing Accessories	$79,498	$7,136,078	1.1%
Building Materials & Garden Equipment	$0 (3)	$6,656,507	0.0%
Home Furnishings & Appliances	$99,796	$5,361,195	1.9%
Total All Retail	$1,691,451	$98,891,173	1.7%
Total Less Motor Vehicles, Gas, and Rests.	$1,691,451	$60,416,969	2.8%

Source: ALH Urban & Regional Economics.
(1) See Table 2.
(2) For the sake of analysis, and based upon visual observation, the store's "Consumables" sales are anticipated to be divided between these two categories 30% food/70% general merchandise, as not all consumables are food or beverage-based products.
(3) Some sales anticipated in these categories, but they are anticipated to be nominal compared to the other retail categories.
(4) Corresponds with the "Seasonal" sales estimate.

The market area demand capture rates by retail category for the Dollar General 4-Zip Code market area range from 1.1% in Clothing & Accessories to 7.9% in General Merchandise. These percentage capture rates would drop when taking other factors into account, such as additional resident demand from beyond the 4-Zip Code market area and drive by traffic associated with tourism and vacationing. Notably, there is very little existing competition in or just beyond the market area to obtain some basic household necessities other than food and some sundry items. Therefore, in many of the categories listed, Dollar General will bring a mix of retail merchandise to the store's market area that is not already present. This will enable market area residents to reduce their travel time and the associated transportation costs (both personal and environmental) to obtain basic household necessities. This includes home furnishings and supplies such as towels, shower curtains, area rugs, vases, ironing boards, laundry baskets, and picture frames; electronics such as wall clocks, alarm clocks, and cell phones; and apparel such as baby and toddler clothes, women and men's underwear, and t-shirts.

There will, however, be potential sales merchandise overlap with the market area's two existing stores selling food items – Holiday Market and Cool General Store. The portion of Dollar General sales anticipated to be most competitive with these stores includes $393,262 in Food & Beverage sales. Some of the Dollar General merchandise similar to these existing market area stores includes canned foods, baking goods, soda, first aid supplies, personal care products, cleaning supplies, pet supplies, and cooler items such as milk, cheese, butter, and sandwich meats. The Holiday Market, however, sells many products not represented at Dollar General, such as fresh and frozen meat, fresh and frozen seafood, an ample array of fresh produce, organic produce, gluten free foods, a broader range of items such as pasta and soups, freshly prepared hot foods, an expansive wine selection as well as hard liquor, and a broader range of beer than typically sold at Dollar General. The provision

of these more full-service grocery items indicates that market area shoppers will still need to frequent Holiday Market to purchase important weekly food items necessary to prepare healthy meals. This, combined with Holiday Market's seasonal appeal to tourist demand, will help insulate the store from the modest amount of competitive food item sales anticipated at Dollar General. Moreover, as a larger store with an established customer base, Holiday Market will have the ability to modify its product mix to maximize sales in products not available at Dollar General yet targeted to meet the needs of its loyal customers.

Similar to Holiday Market, Cool General Store sells some mix of products comparable to Dollar General but also products not available at Dollar General, or even Holiday Market, hence Cool General Store's market distinction as more of a liquor store with a convenience orientation. This is reinforced by the prominent placement of the word "Liquor" on the "Cool General Store" sign above the store's doorway. Already, Cool General Store and Holiday Market coexist in the same market, with the Holiday Market having more product overlap with Cool General Store than Dollar General will, since the Holiday Market sells some hard liquor and expanded wine and beer products not available at Dollar General. While Dollar General will duplicate some of the product offerings at both of these stores, it will also expand the offerings available substantially with its general merchandise products and seasonal items.

The retail demand estimates presented in Table 3 indicate many categories of retail spending in which there are scant retailers present in the Cool market area. Thus, products representative of some of these other categories can be added to existing inventories to insulate stores against potential sales losses resulting from Dollar General's Food & Beverage sales and maintain their broad market appeal, to both market area residents, residents in other communities beyond market area, and tourists and other persons vacationing in the area.

Lastly, at the same time Dollar General may exert competitive pressures on existing retailers, the store will add to the critical mass of retailing opportunities in Cool. Because of the relative lack of shopping opportunities in Cool, market area consumers are leaving the area to make purchases for goods not available in Cool and the general environs. At these times, consumers are also probably taking advantage of more cost effective grocery shopping opportunities available in these more heavily retailed areas. The presence of Dollar General will therefore help reduce the need for some of these out of community shopping trips, thus retaining more consumer dollars within the market area, which could ultimately increase the sales captured by a range of Cool retailers and restaurants.

CONCLUSION

In conclusion, this analysis demonstrates that Cool's market area is underserved by retail goods, including food sales. This indicates that the area is a sales leakage community. The Dollar General store can therefore help strengthen the retail base, enabling market area consumers to meet more of their retail shopping needs close to home. Even with absorption of Dollar General sales market area residents will still need to shop for many retail goods in locations with more ample shopping opportunities, especially in Auburn and Placerville, both of which have retailers offering a wide range of retail goods required by market area households, including food shopping, general merchandise shopping, home improvement stores, clothing stores, and others. However, because the Dollar General store will enhance the critical mass of commercial outlets in Cool, existing retailers and restaurants are anticipated to achieve greater visibility, which will result in enhanced market demand.

Because of Dollar General's relatively low sales volume, which will be divided among many retail categories, compounded by the market area's limited supply of existing retailers, it seems likely that Dollar General's capture of market area retail demand would not result in existing area stores losing a significant volume of existing sales through sales diversion. Thus, existing stores are anticipated to be able to coexist with the Dollar General store and thus not incur a risk of significant sales decline or closure.

CLOSING

ALH Urban & Regional Economics was pleased to prepare these findings pertinent to the proposed Dollar General store in Cool, California. Please let us know if you have any comments or questions on the analysis.

Sincerely,

ALH Urban & Regional Economics

Amy L. Herman
Principal

ALH Econ/2019/1916 Coll Dollar General/Report/1916.r01.doc

ASSUMPTIONS AND GENERAL LIMITING CONDITIONS

ALH Urban & Regional Economics has made extensive efforts to confirm the accuracy and timeliness of the information contained in this study. Such information was compiled from a variety of sources, including interviews with government officials, review of City and County documents, and other third parties deemed to be reliable. Although ALH Urban & Regional Economics believes all information in this study is correct, it does not warrant the accuracy of such information and assumes no responsibility for inaccuracies in the information by third parties. We have no responsibility to update this report for events and circumstances occurring after the date of this report. Further, no guarantee is made as to the possible effect on development of present or future federal, state or local legislation, including any regarding environmental or ecological matters.

The accompanying projections and analyses are based on estimates and assumptions developed in connection with the study. In turn, these assumptions, and their relation to the projections, were developed using currently available economic data and other relevant information. It is the nature of forecasting, however, that some assumptions may not materialize, and unanticipated events and circumstances may occur. Therefore, actual results achieved during the projection period will likely vary from the projections, and some of the variations may be material to the conclusions of the analysis.

Contractual obligations do not include access to or ownership transfer of any electronic data processing files, programs or models completed directly for or as by-products of this research effort, unless explicitly so agreed as part of the contract.

APPENDIX A
REPORT EXHIBITS

Exhibit 1
State of California Board of Equalization Taxable Retail Sales Estimate by Retail Category
2018

Type of Retailer	Total Taxable Sales (1)	State of California Taxable Sales Adjusted to Total Retail	Percent of Total
Motor Vehicle & Parts Dealers	$89,696,668,865	$86,983,283,145	15.6%
Home Furnishings & Appliances	$31,099,159,205	$30,206,241,172	5.4%
Building Materials & Garden Equipment	$39,469,798,311	$37,504,338,446	6.7%
Food & Beverage Stores	$29,697,424,447	$95,997,345,380 (2)	17.2%
Gasoline Stations	$54,302,231,927	$47,435,051,665	8.5%
Clothing & Clothing Accessories	$42,233,560,412	$40,206,357,448	7.2%
General Merchandise Stores	$56,416,292,603	$65,803,636,835 (3)	11.8%
Food Services & Drinking Places	$85,226,196,681	$82,354,452,662	14.8%
Other Retail Group	$61,018,669,056	$70,685,604,584 (4)	12.7%
Total (5)	**$489,160,001,507**	**$557,176,311,337**	**100%**

Sources: California Department of Tax and Fee Administration (CDTFA), "Statewide Taxable Sales by Type of Business, 2018"; U.S. Economic Census, "Retail Trade: Subject Series - Product Lines: Product Lines Statistics by Kind of Business for the United States and States: 2007"; and ALH Urban & Regional Economics.

(1) Taxable sales are pursuant to reporting by the California Department of Tax and Fee

(2) Sales for Food and Beverage Stores have been adjusted to account for non-taxable sales; only 30.0% of all food store sales are estimated to be taxable.

(3) Sales for General Merchandise Stores have been adjusted to account for non-taxable food sales, since some General Merchandise Store sales include non-taxable food items. ALH Urban & Regional Economics estimates that at least 25% of General Merchandise sales are for grocery items that are also non-taxable. This estimate is based on analysis of the 2007 U.S. Economic Census, which attributes approximately 26% of General

(4) Sales for Other Retail Group have been adjusted to account for non-taxable drug store sales, since drug store sales are included in the Other Retail Group category. Sedway Consulting estimates that 33.0% of drug store sales are taxable, based on discussions with the (former) California BOE and examination of U.S. Census data. In California, drug store sales in 2018 represented approximately 11.87% of all Other Retail Group sales. ALH Urban & Regional Economics applied that percentage and then adjusted upward for non-taxable sales.

(5) Totals may not add up due to rounding.

Exhibit 2
Household Income Spent on Retail (1)
United States
2017

Characteristic	All Consumer Units	Household Income Range							
		$15,000 to $29,999	$30,000 to $39,999	$40,000 to $49,999	$50,000 to $69,999	$70,000 to $99,999	$100,000 to $149,999	$150,000 to $199,999	$200,000 and more
Average HH Income	$73,573	$22,315	$34,685	$44,771	$59,382	$83,829	$120,288	$170,234	$306,051
Amount Spent on Retail (2)	$22,911	$13,370	$17,130	$18,277	$22,028	$25,418	$33,044	$40,565	$52,002
Percent Spent on Retail (3)	31%	60%	49%	41%	37%	30%	27%	24%	17%

Sources: Table 1203. Income before taxes: Annual expenditure means, shares, standard errors, and coefficient of variation, Consumer Expenditure Survey, 2017, U.S. Bureau of Labor Statistics; and ALH Urban & Regional Economics.

(1) Includes retail categories estimated to be equivalent to the retail sales categories compiled by the State of California, Board of Equalization (now Department of Tax and Fee Administration).

(2) Includes the Consumer Expenditures categories of: food; alcoholic beverages; laundry and cleaning supplies; other household products; household furnishings and equipment; apparel and services; vehicle purchases, gasoline and motor oil; 1/2 of maintenance and repairs (as a proxy for taxable parts); drugs; medical supplies; audio and visual equipment and services; pets, toys, hobbies, and playground equipment; personal care products and services; reading; and tobacco products and smoking supplies.

(3) Percentages may be low as some expenditure categories may be conservatively undercounted by ALH Urban & Regional Economics.

APPENDIX B
FIRM QUALIFICATIONS AND PRINCIPAL RESUME

FIRM INTRODUCTION

ALH Urban & Regional Economics (ALH Economics) is a sole proprietorship devoted to providing urban and regional economic consulting services to clients throughout California. The company was formed in June 2011. Until that time, Amy L. Herman, Principal and Owner (100%) of ALH Economics, was a Senior Managing Director with CBRE Consulting in San Francisco, a division of the real estate services firm CB Richard Ellis. CBRE Consulting was the successor firm to Sedway Group, in which Ms. Herman was a part owner, which was a well-established urban economic and real estate consulting firm acquired by CB Richard Ellis in late 1999.

ALH Economics provides a range of economic consulting services, including:

- fiscal and economic impact analysis
- CEQA-prescribed urban decay analysis
- economic studies in support of general plans, specific plans, and other long-range planning efforts
- market feasibility analysis for commercial, housing, and industrial land uses
- economic development and policy analysis
- other specialized economic analyses tailored to client needs

Since forming ALH Economics, Ms. Herman's client roster includes California cities, counties, and other public agencies; educational institutions; architectural, environmental, and other real estate-related consulting firms; commercial and residential developers; non-profits; and law firms. A select list of ALH Economics clients includes the following:

- the cities of Concord, Pleasanton, Tracy, Dublin, Inglewood, and Los Banos, the Office of Community Investment and Infrastructure as Successor Agency to the Redevelopment Agency of the City and County of San Francisco, Alameda County Community Development Agency, the Alameda County Fair, Bay Area Rapid Transit District, and East Bay Community Energy;
- the University of California at Berkeley, The Primary School, The Claremont Colleges Services, Stanford Real Estate, and the University of California at Riverside;
- Group 4 Architecture, Research + Planning, Inc., Paul Halajian Architects; LSA Associates, Raney Planning and Management, Inc., Environmental Science Associates (ESA), First Carbon Solutions - Michael Brandman Associates, and Infrastructure Management Group, Inc.;
- Maximus Real Estate Partners, New West Communities, Build, Inc., Arcadia Development Co., Howard Hughes Corporation dba Victoria Ward LLC, Blu Homes, Inc., China Harbour Engineering Company, Kimco Realty, and Align Real Estate LLC;
- Ronald McDonald House and Hospital Council of Northern and Central California; and
- Gresham Savage Nolan & Tilden, PC, Remy Moose Manley, Pelosi Law Group, and Sedgwick LLP.

Throughout her more than 30-year career, Ms. Herman has managed real estate consulting assignments for hundreds of additional clients, including many California cities, corporations, residential, commercial, and industrial real estate developers, and Fortune 100 firms.

PRINCIPAL INTRODUCTION

Ms. Amy Herman, Principal of ALH Economics, has directed assignments for corporate, institutional, non-profit, and governmental clients in key service areas, including commercial market analysis, fiscal and economic impact analysis, economic development and redevelopment, location analysis, strategic planning, and policy analysis. During her career spanning over 30 years, Ms. Herman has supported client goals in many ways, such as to assess supportable real estate development, demonstrate public and other project benefits, to assess public policy implications, and to evaluate and maximize the value of real estate assets. In addition, her award-winning economic development work has been recognized by the American Planning Association, the California Redevelopment Association, and the League of California Cities.

Prior to forming ALH Economics, Ms. Herman worked for 20 years as an urban economist with Sedway Group and then CBRE Consulting's Land Use and Economics practice. Her prior professional work experience included 5 years in the Real Estate Consulting Group of the now defunct accounting firm Laventhol & Horwath (L&H), preceded by several years with the real estate consulting firm Land Economics Group, which was acquired by L&H. During the course of her career, Ms. Herman has established a strong professional network and client base providing access to contacts and experts across a wide spectrum of real estate and urban development resources.

Ms. Herman holds a Master of Community Planning degree from the University of Cincinnati and a Bachelor of Arts degree in urban policy studies from Syracuse University. She pursued additional post-graduate studies in the Department of City and Regional Planning at the University of California at Berkeley. A professional resume for Ms. Herman follows.

ALH | ECON

ALH Urban & Regional Economics

PROFESSIONAL PROFILE

AMY L. HERMAN
PRINCIPAL

ALH Urban & Regional Economics
Berkeley, California

T 510.704.1599
aherman@alhecon.com

SELECT OTHER CLIENTS

- Alameda County Fair
- Arcadia Development Company
- Catellus Development Corporation
- CenterCal Properties
- Claremont University Consortium
- City of Dublin
- Dudek
- Environmental Science Associates
- Equity One
- First Carbon Solutions (formerly Michael Brandman Associates)
- Gresham Savage Nolan & Tilden
- Howard Hughes Corporation
- City of Inglewood
- LSA Associates
- Maximus Real Estate Partners
- The Primary School
- Remy Moose Manley
- Ronald McDonald House
- Signature Flight Support
- Syufy Enterprises
- City of Tracy

Amy L. Herman, Principal of ALH Urban & Regional Economics, has provided urban and regional consulting services for approximately 35 years. During this time, she has been responsible for directing assignments for corporate, institutional, non-profit, and governmental clients in key service areas, including fiscal and economic impact analysis, economic development and redevelopment, feasibility analysis, location analysis, strategic planning, policy analysis, and transit-oriented development. Her award-winning economic development work has been recognized by the American Planning Association, the California Redevelopment Association, and the League of California Cities.

Prior to forming ALH Urban & Regional Economics in 2011, Ms. Herman's professional tenure included 20 years with Sedway Group, inclusive of its acquisition by CB Richard Ellis and subsequent name change to CBRE Consulting. Her prior professional work experience includes five years in the Real Estate Consulting Group of the now defunct accounting firm Laventhol & Horwath (L&H), preceded by several years with the land use consulting firm Land Economics Group, which was acquired by L&H.

Following are descriptions of select consulting assignments managed by Ms. Herman.

ECONOMIC IMPACT ANALYSIS

Alameda County. Prime consultant for a complex team that prepared a Local Development Business Plan for the newly launched East Bay Community Energy Community Choice Aggregation program for Alameda County. ALH Economics components included economic impact and financial analysis of the local development program components.

University of California. Conducted economic impact studies and frequent updates for five University of California campuses: Berkeley, Davis, Riverside, San Francisco, and San Diego. Prepared models suitable for annual updates by campus personnel.

Hospital Council of Northern and Central California. Prepared an analysis highlighting the economic impacts of hospitals and long-term care facilities in Santa Clara County. The analysis included multiplier impacts for hospital spending, county employment, and wages. Completed a similar study for the Monterey Bay Area Region.

Bay Area Rapid Transit District. Completed economic impact analysis of BART's operations in the San Francisco Bay Area region.

Various EIR Firms. Managed numerous assignments analyzing the potential for urban decay to result from development of major big box stores, shopping centers, and sports venues. The analysis comprises a required Environmental Impact Report component pursuant to CEQA.

FISCAL IMPACT ANALYSIS

Stanford Research Park. Analyzed historic and current fiscal contributions generated by the Stanford Research Park real estate base and businesses to the City of Palo Alto, Santa Clara County, and the Palo Alto Unified School District.

City of Concord. Structured and managed fiscal impact analysis designed to test the net fiscal impact of multiple land use alternatives pertaining to the reuse of the 5,170-acre former Concord Naval Weapons Station, leading to possible annexation into the City of Concord, California.

Kimco Realty. Prepared fiscal impact analysis of plans to renovate and redevelop part of Westlake Shopping Center and infill development of a 179-unit apartment project adjoining the shopping center.

Sycamore Real Estate Investments, LLC. Prepared a fiscal impact model for client implementation, to test the General Fund net fiscal impacts of alternative land use mixes.

Residential and Commercial Developers. Prepared fiscal impact studies for new development projects, including residential, office, and mixed-use projects, demonstrating the net fiscal impact on the respective city's General Fund and local school districts.

AMY L. HERMAN
Principal

ECONOMIC DEVELOPMENT AND PUBLIC FINANCE

Infrastructure Management Group. Contributed to due diligence analysis of the proposed Transbay Transit Center to support evaluation of requested bond loan adjustment requests to support project construction.

Alameda County. Managed numerous assignments helping Alameda County achieve its economic development goals for the County's unincorporated areas through surplus site disposition assistance, including market analysis and financial due diligence for residential and commercial mixed-use developments.

Office of Community Investment and Infrastructure as Successor Agency to the Redevelopment Agency of the City and County of San Francisco. Managed financial analysis estimating the tax payments in lieu of property taxes associated with UCSF development of medical office space in the former Mission Bay Redevelopment Project area.

LAND USE POLICY

Union City Property Owner. Provided an independent analysis regarding the reasonableness of the City of Union City continuing to reserve a key development area for office and/or R&D development in the context of the General Plan Update.

Alameda County Community Development Agency. Provided analysis and input regarding the Ashland and Cherryland Business District Specific Plan requirements for non-residential floor space in mixed-use development sites over 10,000 square feet

DCT Industrial Trust (Subsequently acquired by ProLogis, Inc.). Performed economic analysis on a proposed change to the Newark Zoning Ordinance regarding permitted industrial uses. The analysis demonstrated the market, fiscal, and economic impacts that could result from the proposed zoning ordinance change.

City and County of San Francisco. Under direction of the San Francisco Planning Department, conducted analysis and literature review regarding residential and commercial displacement, especially they pertained to two planned Mission District mixed-income apartment projects.

DEVELOPMENT FEASIBILITY

China Harbour Engineering Company Ltd. (CHEC). Prepared a market assessment and development feasibility analysis for the potential development of a 5.54-acre parking lot at the West Oakland BART Station in Oakland, CA for CHEC, the development entity selected by BART to pursue joint development of the site pursuant to an Exclusive Right to Negotiate Agreement.

Align Real Estate, LLC. Prepared independent economic analysis of a proposed residential development in San Francisco on the site of several buildings, including one considered an historic resource pursuant to CEQA. The analysis tested several project alternatives, focusing on net developer margin as an indicator of financial feasibility.

Build, Inc. Conducted financial analysis comparing the development of a prospective San Francisco residential site as a "stand-alone" project compared to a larger "combined lot" project that would incorporate unused floor-area-ratio from an adjacent property.

Various Residential Developers. In support of fiscal impact studies, prepared residential market analysis examining historical development and pricing trends, absorption, and forecasting demand by product type. Prepared achievable pricing estimates by residential unit type and size.

EDUCATION

- Bachelor of Arts degree in urban studies, magna cum laude, Syracuse University.
- Master of Community Planning degree from the University of Cincinnati.
- Advanced graduate studies in City and Regional Planning at the University of California at Berkeley.